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1918-1919

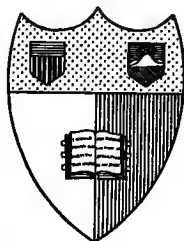
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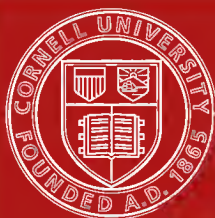
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BULLETIN No. 23-A

1918-1919

DOCUMENTS

RELATING TO

Vocational Education

DOCUMENT I.

General Information Relating to the Administration of Vocational Education in California. Table of Contents—Page 5.

DOCUMENT II.

General Regulations of the State Board of Education for the Establishment and Maintenance of Federal and State Aided Vocational Education in the Public Intermediate and Secondary Schools of California. Table of Contents—Page 11.

DOCUMENT III.

Requirements for Teachers of Vocational Subjects under the Provisions of the Federal and State Vocational Education Acts. Table of Contents—Page 55.

DOCUMENT IV.

Plan for the Supervision of Vocational Courses in Agriculture under the Provisions of the Federal and State Vocational Education Acts. Table of Contents—Page 61.

DOCUMENT V.

Plan for the Training of Vocational Teachers under the Provisions of the Federal and State Vocational Education Acts. Table of Contents—Page 65.

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CALIFORNIA STATE BOARD OF EDUCATION

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PREFACE.

This bulletin includes all of the material contained in agreements entered into between the California State Board of Education and the Federal Board for Vocational Education for the administration of the Federal and State Vocational Education Acts.

The matter contained in these Documents applies to the administration of the above-mentioned acts for the fiscal year 1918-19 only. They may, therefore, be amended by the State Board of Education, with the approval of the Federal Board, before the beginning of the next fiscal year.

The material contained in this bulletin has been assembled to familiarize the public with the entire scheme of the Federal and State Boards for the promotion of vocational education in California.

EDWIN R. SNYDER,
Commissioner of Industrial and Vocational Education.

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DOCUMENT I.

GENERAL INFORMATION RELATING TO THE ADMINISTRATION OF VOCATIONAL EDUCATION IN CALIFORNIA.

DIVISION I.

Acceptance of Act.

1. The California Legislature in an act accepted the provisions and benefits of the Federal Act for vocational education. The Governor approved the same May 29, 1917.
2. The State Treasurer is designated custodian of the funds.
3. The California Act provides for the acceptance of the funds for:
 - a. The payment of salaries of teachers of trade, home economics, and industrial subjects.
 - b. The payment of salaries of teachers, directors, and supervisors of agricultural subjects.
 - c. The maintenance of courses, classes, or schools for the training of—
 - (1) Teachers of trade and industrial subjects.
 - (2) Teachers, directors, and supervisors of agricultural subjects.
 - (3) Teachers of home economics.
4. In accepting the provisions and benefits of the Federal Act, the State Act provides for state appropriations which shall equal all Federal apportionments made to the State of California. The Federal funds and the State funds combined constitute the vocational education fund, which fund is created by the act. The entire fund, including Federal and State moneys, is governed by the provisions of the Federal Act and by the regulations of the State Board, acting under the provisions of said act.

DIVISION II.

Administration and Supervision.

1. The State Act designates the California State Board of Education as the State Board to carry out the purposes and provisions of the Federal Act. Said board is by this act given all necessary power and authority to co-operate with the Federal Board in carrying out the provisions of the Federal Act.
 - a. The California State Board of Education consists of seven members appointed by the Governor, each to hold office for a term of four years. Each year for three successive years

two members are appointed; the fourth year one member is appointed. Vacancies on the board are filled by the Governor. No member of said board may, during his term of office, hold any salaried educational position. The board is required to meet at least quarterly. Fifteen dollars per day and expenses are allowed each member while the board is in session. The Superintendent of Public Instruction is secretary and acts as executive officer of the board, to carry out the plans of the board. He is not a member of the State Board.

- b. The Political Code requires the State Board to appoint three commissioners as follows:

A Commissioner of Elementary Schools.

A Commissioner of Secondary Schools.

A Commissioner of Industrial and Vocational Education.

The salaries of each of these officers are fixed at \$4,000 per annum. The law makes the commissioner of industrial and vocational education the supervisor of all schools in which industrial and vocational education is given. He is required also to perform such other duties as may be assigned him.

2. The vocational courses in agriculture maintained under the provisions of the Federal and State Acts are to be under the supervision of a State Supervisor of Agriculture chosen under a plan of supervision set up by the State Board of Education and approved by the Federal Board. (See Document IV.)
3. The industrial, home economics, and trade courses and classes; and general continuation classes, are to be under the direct supervision of the Commissioner of Industrial and Vocational Education, who will be assisted in the work by the Commissioner of Secondary Education.

DIVISION III.

Plans and Regulations of the State Board of Education.

This bulletin includes all of the regulations of the State Board of Education for the application of the Federal and State Vocational Education Acts in the State of California. It contains five documents, as follows:

- DOCUMENT I. General Information Relating to the Administration of Vocational Education in California.

- DOCUMENT II. General Regulations of the State Board of Education for the Establishment and Maintenance of Federal and State Aided Vocational Education in the Public Intermediate and Secondary Schools of California.
- DOCUMENT III. Requirements for Teachers of Vocational Subjects under the Provisions of the Federal and State Vocational Education Acts.
- DOCUMENT IV. Plan for the Supervision of Vocational Courses in Agriculture under the Provisions of the Federal and State Vocational Education Acts.
- DOCUMENT V. Plan for the Training of Vocational Teachers under the Provisions of the Federal and State Vocational Education Acts.

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GENERAL REGULATIONS OF THE STATE BOARD OF EDUCATION FOR THE ESTABLISHMENT AND MAINTENANCE OF FEDERAL AND STATE AIDED VOCATIONAL EDUCATION IN THE PUBLIC INTERMEDIATE AND SECONDARY SCHOOLS OF CALIFORNIA.

Act of Adoption.

In accordance with the provisions of:

a. An Act passed by the Senate and House of Representatives of the United States of America in Congress assembled, entitled "An Act to provide for the promotion of vocational education; to provide for co-operation with the States in the promotion of such education in agriculture and the trades and industries; to provide for co-operation with the States in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure," and approved by the President, February twenty-third, nineteen hundred seventeen;

b. "An Act to accept the provisions and benefits of an act passed by the Senate and House of Representatives of the United States of America in Congress assembled, and approved February twenty-third, nineteen hundred seventeen, to provide for the promotion of vocational education, to create a vocational educational fund and making an appropriation therefor," and approved by the Governor, May twenty-nine, nineteen hundred seventeen;

c. The Political Code of the State of California;

d. And Bulletin No. 1, Federal Board for Vocational Education; The State Board of Education herewith adopts general regulations governing the establishment of Federal and State aided vocational education in the State of California, and the apportionment of the Federal and State funds provided for this purpose.

Federal and State Acts—School Law, 1917, pages 34 to 44, inclusive.
Section 1750c of the Political Code—School Law, page 179.

Adopted by the State Board of Education July 11, 1918.

Approved by the Federal Board for Vocational Education, 1918.

PART I.

VOCATIONAL COURSES IN AGRICULTURE.

Policy of the Board.

The State Board of Education is of the opinion that the first step necessary in the promotion of vocational agricultural education in California is the development in the secondary schools of a proper type of course, and a satisfactory method of instruction in the subject.

In carrying out this policy the Board desires to co-operate with local school authorities in the establishment of a limited number of Federal and State aided four-year courses,—these courses to be well distributed geographically throughout the agricultural regions of the State.

In selecting the location for a course the Board will take into consideration the agricultural possibilities of the community, the size and population of the high school district, the attitude of the school authorities and the people of the community toward the work, and the order in which satisfactory applications are filed in Sacramento.

The Board will aim to authorize no more courses for any given year than may be aided in full in the amounts specified below.

Schools are expected to maintain only a one year course at first, after which the other years should be added just as soon as a sufficient number of prepared pupils desire the work.

Amount of Federal and State Special Aid Offered.

High school districts that maintain, during the school year 1918-19, one or more *standard* vocational courses in agriculture will be reimbursed by the State Board of Education as follows:

For the first teacher unit of instruction provided, not to exceed----	\$1,000
For the second teacher unit of instruction provided, not to exceed---	700
For the third teacher unit of instruction provided, not to exceed----	500
For the fourth teacher unit of instruction provided, not to exceed---	300

Provided, that the Board will in no instance reimburse any such district in a sum which shall exceed one-half of the amount paid as compensation for instruction in the *required applied and supplemental* subjects of said course or courses.

A teacher unit of instruction is hereby defined as six sixty-minute hours of teaching and study supervision each day for the school year.

The minimum length of the school year for the above courses shall be thirty-six weeks of full time school work plus the necessary care of pupils' projects throughout all vacation periods.

A proportionate reimbursement will be made for a fractional part of a teacher unit of instruction.

The above reimbursements will be made only on account of instruction provided under the following conditions:

First, the rate of salary paid to teachers of applied work shall be not less than \$1,500 per annum.

Second, the rate of salary paid to teachers of supplemental and academic subjects shall be not less than \$1,200 per annum.

Third, the district maintaining vocational courses in agriculture shall provide for the supervision of pupils' project work throughout all vacation periods.

Reimbursement for instruction provided during the school year 1918-19 will be made early in the first quarter of the fiscal year 1919-20.

In administering the provisions of the Federal and State Acts the State Board of Education assumes no financial obligation other than that of apportioning the funds available therefrom. If at any time the vocational education funds should fall short of meeting the obligations that may grow out of this regulation, such funds as are available for agricultural instruction will be apportioned pro rata in accordance with such obligations among the districts that maintained *standard* vocational courses in agriculture.

Standard Courses Defined.

A vocational course in agriculture becomes a *standard course* when it complies with all of the following conditions:

a. When its establishment has been authorized by the State Board of Education.

b. When it is maintained in accordance with the above requirements, and the regulations of the State Board of Education, established in conformity with the provisions and requirements of the Federal and State Vocational Education Acts, and section 1750c of the Political Code of the State of California, and as approved by the Federal Board and set forth under the caption "Provisions and Requirements of the State Board of Education, Relating to Standard Vocational Courses in Agriculture," page 19 of this bulletin.

c. When after inspection and report it has been officially approved by the State Board of Education as conforming to all of the above requirements, including that of providing project supervision during the months of July and August.

Application for Authority to Establish and Maintain Standard Vocational Courses in Agriculture.

High School boards applying for authority to establish and maintain vocational courses in agriculture, under the provisions of the Federal and State Vocational Education Acts, must submit, on blanks furnished

by the State Board of Education, such information as may be desired, including the following:

1. Approximate area in square miles of:
 - a. High school district.
 - b. ¹Outside territory served by high school.
2. Approximate acres under cultivation in:
 - a. High school district.
 - b. Outside territory served by high school.
3. Approximate acres of grazing land in:
 - (a) High school district.
 - (b) Outside territory served by high school.
4. Principal occupations of people in order of importance—agricultural, commercial, mining, industrial and trade, etc.
5. Character of principal agricultural occupations in order of importance—stock raising, dairying, poultry raising, field crops, horticulture, viticulture, etc.
6. Principal agricultural products of community in order of importance—hogs, sheep, beef or dairy stock, dairy products, horses, turkeys, chickens, alfalfa, hay, wheat, oats, barley, rice, corn, hops, cotton, potatoes, onions, sugar beets, beans, watermelons, cantaloupes, walnuts, almonds, olives, peaches, apricots, plums, prunes, pears, apples, figs, grapes, raisins, oranges, lemons, pomeloes, berries, garden truck, etc.
7. Enrollment of pupils in all elementary schools for the preceding year in:
 - a. High school district.
 - b. Outside territory served by high school.
8. Enrollment in each grade of high school for preceding school year.
9. Number of boys in district over fourteen and less than eighteen years of age who are not attending school.
10. Number of girls in district over fourteen and less than eighteen years of age who are not attending school.
11. Number of persons who have expressed desire to take advantage of course.
12. A description of the school lands, shops, laboratories, classrooms and equipment that will be available for the use of pupils.

¹Territory outside of the district, that sends a majority of its high school pupils to the high school of said district, constitutes territory served by the high school.

PROVISIONS AND REQUIREMENTS OF THE STATE BOARD OF EDUCATION RELATING TO STANDARD VOCATIONAL COURSES IN AGRICULTURE.

In addition to the provisions and restrictions set forth under the above topics, "Amount of Federal and State Special Aid Offered," and "Form of Application for Authority to Establish and Maintain Standard Vocational Courses in Agriculture," each course must be established and administered in accordance with the following regulations:

1. *Division of Time*: Not less than three hours per day of each pupil's time must be devoted to applied work which shall include farm projects and the instruction appertaining thereto, and farm mechanics, and not less than three hours per day to supplemental and other academic work in class or in school; provided that if an equivalent minimum amount of time be given each, the academic and applied work may be planned to alternate daily, weekly, or biweekly.

Each year course should provide for two units of applied and two units of academic work.

Not less than three-fifths of the total time set aside for applied work must be devoted to farm projects, and not less than one-fifth to farm mechanics.

2. The *Supplemental Subjects* shall consist of farm English; farm applications of science; farm applications of mathematics; hygiene and sanitation; the farm home, and rural home and community life; and farm economics.

3. The *other academic subjects* shall consist of English and literature; applied citizenship; the development of modern democracy and democracies; the development of the United States; and physical education.

4. *Course of Study*: The distribution of the subjects of the course and the value of each should be as follows:

SUBJECTS OF COURSE	Units of work				
	Four years	First year	Second year	Third year	Fourth year
Applied work (special aid allowed):					
Farm projects, farm mechanics.....	8	2	2	2	2
Supplemental subjects (special aid allowed):					
Farm English	$\frac{1}{2}$	$\frac{1}{2}$			
Farm applications of science.....	2	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Farm applications of mathematics.....	$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	
Hygiene and sanitation.....	$\frac{1}{2}$	$\frac{1}{2}$			
Farm home, and rural home and community life	$\frac{1}{2}$				$\frac{1}{2}$
Farm economics	$\frac{1}{2}$				$\frac{1}{2}$
Other required academic subjects (no special aid allowed):					
English and literature.....	1		$\frac{1}{2}$	$\frac{1}{2}$	
Citizenship	$\frac{1}{2}$		$\frac{1}{2}$		
Development of modern democracy and democracies	$\frac{1}{2}$			$\frac{1}{2}$	
Development of the United States.....	$\frac{1}{2}$				$\frac{1}{2}$
Physical education					
Totals	16	4	4	4	4

The first year's work and the applied work must be as prescribed above. All of the other subjects mentioned must be included in the last three years of the course but their places in the program may be changed and their values modified by mutual agreement.

5. *Farm Projects*: Each pupil must conduct at least one farm project during the school year. The project should not necessarily be the same for all pupils, but should be selected on the basis of the pupil's interest, opportunity and strength. Such project work must consist of the production and marketing of farm, orchard, vineyard or garden crops; or of bees, poultry, stock, or other animals, or their products.

The projects must be conducted upon commercially productive bases. Each pupil must buy or lease the necessary land or animals; purchase the necessary seed, fertilizers and feed; and may rent teams or farm implements, and employ labor. He must also market the product; keep

a complete record of all of the above and other necessary transactions, together with an account of the time spent by him on his project, and the value of the same; close the project, and balance his accounts.

Where a pupil *buys or leases* from a parent or other person, the transaction must be conducted upon business principles in order that he may know when he closes his project whether or not his venture has been a success or a failure commercially.

A *contract* entered into by a pupil must be countersigned by a parent, guardian, or other adult in order that it may have a legal status.

6. *Farm Mechanics*: The first year of the course in farm mechanics must include farm drawing; farm carpentry; concrete and cement work; plumbing; pipe fitting; tinning; and the care and repair of farm buildings, machinery and tools. The other years must include farm blacksmithing, a study of pumps, motors, steam and gas engines, automobiles, electrical wiring, and other machines and operations common on the farm. (The age, strength and experience of each pupil should govern the extent and intensity of his training in this subject.)

7. *Farm English*: The principal source of material for this subject must be the scientific and other writings dealing with farm and rural life; and the formal side of the subject must consist largely of oral and written composition and correspondence based upon farm life and the business of farming.

8. *Farm Applications of Science*: This subject should not include the systematic study of any of the sciences as a whole, nor should it conform to the requirements of a general science course. The science problems of the farm should constitute the basic material for the course.

Biology and its subdivisions, chemistry, physics, physiography, geology, etc., will all have to be drawn upon in order to explain these problems. Systematic studies of science topics should be made only when they become necessary as bases for the comprehension of the specific principles that underlie the explanations of the special problems at hand. As a rule these studies should not be made until the pupil is confronted with the practical problem.

9. *Farm Applications of Mathematics* also should draw upon the entire field. Arithmetic, algebra, geometry, trigonometry, and surveying should each contribute its part.

Farm mechanics, farm drawing, and farm applications of science will present many problems for solution. Farm accounts, measurements and weights, land measurements, field plottings, and irrigation problems should furnish most of the remainder of the material for the course.

Algebra, geometry, and trigonometry should not be studied as sciences, but they should be freely drawn upon in solving the problems

mentioned above. Only such developmental processes should be studied as are necessary to give a foundation for the application of the subject to the problems. The process work in algebra should not go beyond fractional equations. Only such facts of geometry as are necessary for the solution of common farm problems should be taught. In general, geometrical demonstrations should be omitted. Only such trigonometric functions as are applicable to these problems should be considered, and they should be studied only in relation to their applications.

10. *Hygiene and Sanitation*: This subject should be studied not only in its relationship to man in general, and to animal and plant life, but also in its relationship to the individual pupil. The subject should deal largely with concrete situations to be found on the farm. However, the problem of general hygiene and sanitation should not be neglected. Time should be given to a comparative study of the subject as it applies to both rural and urban communities.

11. *Farm Home, and Rural Home and Community Life*: Two somewhat distinct topics are included in this subject:

The first has to do with the material or physical aspects of the farm home. Among other things, it should deal with the selection of the home site, the location of farm buildings, their construction and decoration, and the laying out and care of the home grounds.

The second topic, rural home and community life, has to do with home social duties, and the relationships between the farm home and the community. As a part of the course, provision should be made for the study of rural community organizations and the part they play in the recreational, fraternal, political, business and social life of the community.

This study should lead to a full comprehension of the many advantages of farm life.

12. *Farm Economics* underlies business success for the farmer. In no other individually administered industry are there so many complex problems for solution. To illustrate: The decision as to whether it would be better to engage in general farming, stock raising, dairying, horticulture, or some other line, is a matter of economics. Intelligent choice is modified by available capital, climatic conditions, character of soil, acreage, prospective market values, cost of operation, cost of marketing, etc.

Should the farmer decide on field crops, the kind and variety, the place and time of planting, the choice of seed and fertilizer, the preparation of the ground, the amount and character of cultivation, the method of gathering and marketing the harvest, and the effect of the crop upon the future productivity of the soil are a few of the factors

that he must consider. Should he decide on any other line, the factors for consideration are equally numerous, and intelligent decision is equally difficult and important.

Such problems as farm labor and the advantages and disadvantages of co-operative buying and selling and co-operative ownership of stock, implements, and machinery should also be considered in this course.

The experiences of the pupils in farm accounting secured as part of their project work should be rounded out, and the economic factors underlying farm accounting should be considered.

13. *English and Literature*: Oral and written composition should be emphasized throughout the course. The topics discussed should be selected from concrete situations within the experiences of the pupils. Attention should be given also to the composition of business letters and documents.

In the beginning, the literature selected should be that commonly read by the pupils. The work in this line should be confined largely to a study of modern and current writings, since instruction in the classics rarely functions with pupils of this age and attainment. As far as possible the literature selected should be such as extols rural life and nature.

14. *Citizenship*: This subject *should not* be construed to mean civics as generally comprehended and as usually taught. The purpose of the course should be to develop intelligent, aggressive citizens of the community, the State, and the Nation. It should develop within the pupils power for personal control in social relationships.

It should provide for a study of the institutions (legal, political, economic, educational, religious, fraternal, etc.) to which the pupils will have to adjust themselves, and should emphasize their social relationships to these institutions and to the members thereof.

The course should result in the production of personalities capable and willing to co-operate as members of such organizations, and should also create within the pupils an attitude of toleration toward all desirable social institutions and toward the beliefs and customs of the individual members of these.

Special emphasis should be placed on the attitude of the individual toward local, state, and national laws, and toward community customs.

The case method of instruction should be largely used. Generalizations should be arrived at through discussions of real problems of relationship between individual and individual, and individual and institution.

15. *Development of Modern Democracy and Democracies*: One aim of this subject is to instill in the hearts of the pupils the spirit of personal democracy, to break down the growth of class stratifications,

all of which are deadly to democratic institutions. The work in this phase of the subject should largely consist of a study of men of great achievement whose lives exemplify the spirit of personal democracy. Class discussions of the subject, and also the application of the principle of democracy in the daily lives of the pupils, should constitute a part of the work.

The other aim of the subject is to develop, through an historical study, knowledge of, and sympathy for, the great modern world democracies and their peoples. This study should lead to an organization of the principles fundamental in the establishment and the administration of the modern democratic state, and should create a background for the study of the subject, "The Development of the United States."

16. *Development of the United States*: The fundamental aim of this subject is to develop a love of country, an appreciation of our form of government, and a determination to support it at any cost. The study should lead to a comprehension of the fact that great masses of people cannot govern themselves and insure personal liberty without also restricting their liberties, that the thickly populated community with its diversified activities must restrict individual liberty more than the thinly populated community, that good citizenship today is a vastly different thing from good citizenship a half century ago.

Unfortunately in the study of United States history, too often, the tendency has been to teach chronologically by periods, and to emphasize these periods in direct proportion to their remoteness.

The teacher of this subject should select the important industrial, commercial, political, and other social problems of the day, and teach them in their historical settings. In so doing he should turn upon them not only the searchlight of the past but also the searchlight of the current experiences of other great world democracies. The instruction should lead the pupils to realize fully the fact that as population becomes more congested, more restrictions must be placed upon the individual in order to protect him from exploitation by the unscrupulous.

17. *Physical Education*: In this subject the work must conform to the requirements of the State Department of Physical Education. However, attention is directed to the importance of having every pupil who takes this course engage in some co-operative form of play activity. Exercises should be provided also to relieve fatigue and to prevent possible deformities that may result from abnormal postures, or from activities attendant upon the school and field work.

18. *Separate Classes* in all Federal and State aided subjects must be maintained for the pupils of this course.

Pupils belonging to different years of the course may be instructed in the same class.

No class in Federal and State aided subjects shall at any time consist of more than twenty pupils.

19. *Individual Instruction*: The individual task rather than the class method of instruction shall prevail in supplemental and other academic as well as in applied subjects.

20. *Individual Standard*: No uniform minimum standard shall be required for completion of any of the subjects of the course, but a certificate issued on a blank furnished by the State Board of Education, shall be given to each pupil completing a year's work. Said certificate shall contain his correct rating in percentages in all subjects of the course.

21. *Admission Requirements*: Any person of either sex over fourteen years of age, who may be able to profit by the work, without regard to scholarship or grade of school previously attended, shall be admitted to the course.

Pupils not residing on farms should be urged to secure some experience as farm workers before entering upon the second year's work.

Before entering the third year of the course each pupil must submit evidence of having had at least eight weeks of experience as a worker under employment on a ranch, farm, or market garden, and before entering the fourth year of the course each pupil must submit evidence of having had at least sixteen weeks of such experience.

22. *Advanced Standing*: A pupil belonging to another course, who desires to prepare for the occupation of farming, may be permitted, with the approval of the teacher in charge of this course, to elect the applied work and any additional agricultural subjects; *provided*, that his equipment in the supplemental subjects of the course is such as to enable him to pursue the work with success, and without detriment to the remainder of the class; and that his presence shall in no manner modify the content of the subject or the method of instruction therein; *and provided, further*, that the number of such special pupils shall not exceed 25 per cent of the total number of pupils (special and regular) enrolled in the class.

23. *Teachers of Applied Work*: Supervisors of the project work of the pupils must hold special certificates of vocational or technical arts type in agriculture, and must be experienced in farming. They must be employed for a twelve-month year and required to give during this time approximately forty-eight weeks of service; *provided*, that where proper provision has been made for the care of the projects of their pupils, arrangements may be made with the State Board of Education whereby they may be permitted to visit other schools or attend courses

or classes provided for the advanced training of teachers of vocational agriculture.

These teachers must give the instruction relating to the project work. They may give instruction also in farm mechanics and the supplemental subjects of the course.

While their pupils are engaged in project work said teachers must not be required to instruct academic classes of any character.

It shall be the duty of the high school board to see that the supervisors of project work shall have adequate transportation facilities to enable them to visit the farm projects of the pupils.

24. *Teachers of other work*: The farm mechanics and supplemental subjects of the course may be taught also by teachers holding special certificates to instruct in the same, or by teachers holding regular high school certificates, and in addition thereto, State Board credentials authorizing special certification in the same.

The other academic subjects of the course may be taught by teachers holding regular high school certificates or, if special subjects, by teachers holding special certificates authorizing them to instruct in the same.

25. *Teacher in Charge*: One of the supervisors of project work mentioned under 23 must be given general charge of the course maintained in each school and he must be made responsible, under the direction of the principal of the high school, for all instruction provided for the pupils.

26. *Equipment*: The high school board must provide such lands, shops, laboratories, class rooms, equipment and supplies as are deemed necessary by the State Board of Education for successfully carrying out the instruction contemplated in this course.

A small plot of land will be sufficient for the experimental work conducted in connection with this course.

The science laboratories common to the high schools of this state will be sufficient to meet the need. However, some special pieces of apparatus may be required, especially for the advanced work.

With slight modifications the manual training laboratory of the rural high school will be sufficient for the first year course in farm mechanics.

A permanent farm mechanics laboratory should be built and equipped largely by the pupils as a part of their farm mechanics work.

27. *Expenditures*: Said board must expend for the maintenance of the course, including teachers' salaries, overhead and other current expenses, an amount, the ratio of which shall be not less than eighteen hundred dollars (\$1800.00) per annum for each class organization.

28. *Agricultural Clubs*: Schools maintaining vocational agricultural courses, under the provisions of the Federal and State Vocational Education Acts, must provide also for the organization and supervision of agricultural clubs for pupils not maintaining project work as a part of this course. Said schools can not accept aid through the University of California on account of such work.

29. *Attendance*: The attendance of pupils upon vocational agricultural courses shall be kept as provided in the regulations of the State Board of Education. (See Regulations State Board of Education, School Law, 1917, page 323.)

PART II.

VOCATIONAL TRADE, HOME ECONOMICS AND INDUSTRIAL COURSES, AND CONTINUATION CLASSES.

Policy of the Board.

It is the purpose of the Federal and State Acts to *promote* vocational education. It is not the purpose of these acts to provide funds for the aid of general education, or vocational courses that are already well financed by the State and by local communities.

It is the belief of the Board that the most important problem at present is the development of part-time and full-time type courses of study in home economics, and in the various trades and industries. Naturally, the larger industrial centers offer the best opportunities for the solution of the problem.

Later, when the cities have developed satisfactory type courses, promotion in the field will consist of the extension of the work to the smaller centers of population.

Experience in California has proven that it is exceedingly difficult to retain the character of industrial and trade instruction in the public schools. That the situation is similar throughout the country is evidenced by the restrictions set up in the Federal Act.

In working out its requirements the State Board of Education has tried to obey the spirit as well as the letter of the law. The restrictions placed upon local communities may appear to be unusually severe, but they are deemed necessary in order to promote the best interests of vocational education.

For the present the Board will not apply any of the special Federal and State funds to the promotion of vocational classes in which more than half of the class period is maintained after 6 p.m.

Amount of Federal and State Special Aid Offered.

High school districts that maintain, during the school year 1918-19, *standard* full-time, *standard* part-time and other *standard* special day courses or classes in trade, home economics, or industrial subjects; or *standard* general continuation classes in civic and vocational subjects; or *standard* co-operative part-time courses or classes in trade or industrial subjects, will be reimbursed by the State Board of Education for such courses or classes maintained in *each high or intermediate school* as follows:

First:

a. For the first teacher unit of instruction provided in the applied and supplemental subjects of a full-time day course in any distinct trade or industry-----\$600.00

b. For the first teacher unit of instruction provided in the applied and supplemental subjects of a co-operative part-time day course in any distinct trade or industry-----\$600.00

c. For the first teacher unit of instruction provided in the applied and supplemental subjects of a full-time day course in home economics -----\$600.00

d. For the first teacher unit of instruction provided in the applied and supplemental subjects of part-time or other special day classes in home economics or in any distinct trade or industry -----\$600.00

e. For the first teacher unit of instruction provided for general continuation classes in civic and vocational subjects-----\$600.00

Second:

For each additional unit of instruction provided as above-\$600.00

Provided, that, if the funds available for additional units of instruction in any type of course or class mentioned above should be insufficient to meet all of the demands in the State, the total amount available for the purpose will be apportioned pro rata in accordance with the amounts due the various schools of the State on account of such additional units of instruction.

A teacher unit of instruction is hereby defined as six sixty-minute hours of teaching and study supervision each day for the school year.

The minimum length of the school year for the above courses and classes shall be thirty-six weeks.

A proportionate reimbursement will be made for a fractional part of a teacher unit of instruction.

The above reimbursements will be made only on account of instruction provided by teachers who receive a salary, the rate of which shall be not less than \$1,200 per annum.

Reimbursements for instruction provided during the school year 1918-19 will be made early in the first quarter of the fiscal year 1919-20.

In administering the provisions of the Federal and State Acts, the State Board of Education assumes no financial obligation other than that of apportioning the funds available therefrom. If at any time the vocational education funds provided for the various classes of work should fall short of meeting the obligations that may grow out of this regulation, such funds as are available for each type of instruction will be apportioned pro rata among the districts maintaining the courses and classes specified above.

Standard Courses Defined.

A full-time, part-time or other industrial home economics, or trade course or class; or a part-time general continuation class becomes a standard course or class when it complies with all of the following conditions:

a. When its establishment has been authorized by the State Board of Education.

b. When it is maintained in accordance with the above requirements, and the regulations of the State Board of Education established in conformity with the provisions and requirements of the Federal and State Vocational Education Acts, and section 1750c of the Political Code of the State of California, and as approved by the Federal Board and set forth under the caption, "Provisions and Requirements of the State Board of Education Relating to Standard Full-Time, Co-operative, Part-Time and other Special Day Trade, Home Economics and Industrial Courses and Classes; and Standard Part-Time General Continuation classes," page 32 of this bulletin.

c. When after inspection and report it has been officially approved by the State Board of Education as conforming to all of the above requirements.

Application for Authority to Establish and Maintain Standard Vocational Home Economics, and Industrial Courses and Classes, and Standard General Continuation Classes.

High school boards applying for authority to establish and maintain standard full-time, part-time or other trade, home economics, or industrial course or classes; or standard part-time general continuation classes, under the provisions of the Federal and State Vocational Edu-

cation Acts, must submit, on blanks furnished by the State Board of Education, such information as may be desired, including the following:

DIVISION I.

Application to Establish Standard Full-time, Co-operative, Part-time and Other Courses or Classes in Trade or Industrial Subjects; and General Continuation Classes.

1. Principal occupations or people in order of importance—agricultural, commercial, industrial or trade:

a. In high school district.

b. ²In outside territory served by high school.

2. Character of trade or industrial occupations of community in order of importance—building trades, iron working, printing, etc.

3. Principal industrial and trade occupations in order of importance—carpentry, plumbing and steam fitting, sheet metal work, painting and decorating, molding, pattern making, machine shop work, electrical wiring, and whether applied to house, ship, car, locomotive, machine, automobile, tractor, farm implement, or other construction; brick masonry, stone masonry, stone cutting, cement construction, tailoring, dressmaking, millinery, power machine work, etc.

4. Enrollment of pupils in all elementary schools for preceding school year in:

a. High school district.

b. Outside territory served by high school.

5. Enrollment in each grade of high school in:

a. Entire high school district.

b. Particular high school in which course is contemplated.

6. Name and location of high school that will administer the course.

7. Type of course or class—full-time day vocational course, part-time day co-operative vocational course, part-time special day vocational class, part-time day general continuation class, or other special day vocational class.

8. Name of course—occupation for which it contemplates training, or if a supplemental subject name of subject and occupation it supplements.

9. Open to boys, girls, men, or women, and any special qualifications for entrance.

10. If a full-time or co-operative course, number of beginners annually employed in community in occupation for which it trains.

²Territory outside of a high school district, that sends a majority of its high school pupils to the high school of said district, constitutes territory served by the high school.

11. Number of pupils who have expressed desire to take advantage of course.

12. Length of course in years—if a full-time course or a part-time co-operative vocational course; and number of sixty-minute hours of instruction per week if a part-time special day vocational class, a part-time general continuation class or other special day vocational class.

13. If a co-operative course, time schedule of school and shop work; if a part-time general continuation or other class, length of daily recitations, number of recitations per week, and days upon which class meets.

14. An outline of the course of study contemplated.

15. A description of the shops, laboratories, classrooms, and equipment that will be available for the use of pupils.

DIVISION II.

Application to Establish Full-time and Part-time Standard Home Economics Courses and Classes.

1. Enrollment of pupils in all elementary schools for preceding school year in:

a. High school district.

b. Outside territory served by high school.

2. Enrollment in each grade of high school in:

a. Entire high school district.

b. Particular high school in which course is contemplated.

3. Name and location of high school that will administer course.

4. Type of course or class—full-time day course or part-time special day class.

5. If a part-time course, name of household occupations to be taught, or if supplemental, name of subject and household occupation it supplements.

6. Length of course in years, if a full-time course, and if a part-time special course, number of recitations per week, length of each recitation, days upon which they occur, and total number of hours of instruction per week.

7. State any restrictions on entrance not covered by State Board requirement.

8. Number of pupils who have expressed desire to take advantage of the course.

9. An outline of the course of study contemplated.

PROVISIONS AND REQUIREMENTS OF THE STATE BOARD OF EDUCATION RELATING TO STANDARD FULL-TIME, CO-OPERATIVE, PART-TIME AND OTHER SPECIAL DAY TRADE, HOME ECONOMICS AND INDUSTRIAL COURSES AND CLASSES; AND STANDARD PART-TIME GENERAL CONTINUATION CLASSES.

High school boards maintaining full-time, part-time or other industrial or trade courses or classes; or part-time general continuation classes, under the provisions of the Federal and State Acts, shall, when so directed by the State Board of Education, appoint local advisory committees for vocational courses and classes to consist of three or more members and to be composed of one school official, and an equal number each of employees and employers, and local advisory committees for continuation classes to consist of five or more members and to be composed of one school official, two housewives, and an equal number each of employees and employers. The members of such advisory committees shall serve without pay and their duties shall be:

1. To visit and inspect the work of the courses and classes which they are authorized to represent.

2. To counsel and advise with local boards of education upon the problem of making the work of the courses and classes they represent as practical as possible.

3. To act with the representatives of the State Board of Education and to assist them in their inspection of the management of these courses and classes and the methods of instruction followed therein.

4. To submit annually, during the month of May, a written report to the local high school board and to the State Board of Education, dealing with the vocational courses and general continuation classes maintained in the high school district, and setting forth their observations and any recommendations that they may desire to make for the future conduct of such courses and classes.

DIVISION A.

Full-time Day Courses in Trades and Industries.

In addition to the provisions and restrictions set forth under the foregoing topics, "Amount of Federal and State Aid Offered," and "Application to Establish Standard Full-time, Co-operative, Part-time and other Courses or Classes in Trade or Industrial Subjects; and General Continuation Classes," each course must be established and administered in accordance with the following regulations:

1. *Division of Time*: Not less than three hours per day of each pupil's time must be devoted to applied industrial or trade work, and not less than three hours per day to supplemental and other academic

work; provided, that if an equivalent amount of time be given to each, the academic and the practical work may be planned to alternate daily, weekly, or biweekly; and provided, further, that at least one-half of the entire time of instruction shall be devoted to applied work.

2. *Applied Work*: As far as possible the applied work must be conducted in a manner similar to that employed by the best industrial shops. The apprenticeship method of instruction should prevail.

Pupils pursuing the first year of the course must spend at least one-half of the time devoted to applied work on projects that have a marketable value, and pupils pursuing the other years of the course must so spend at least two-thirds of such time.³

Where a course exceeds two years in length, or where it is planned to cover only the last two years of a four year high school course, it is highly desirable that a part of the experience in applied work be secured under apprenticeship by the co-operative plan as outlined in *Division B* below. This is particularly desirable for occupations such as the building trades wherein satisfactory work can not be provided in a school shop.

Individual pupils belonging to courses maintained under this *Division* may be permitted to secure their experience in applied work in apprenticeship, provided that arrangements are made whereby such experience may be supervised as specified under *Division B* below. (The out-of-school time of such a pupil may not be counted as school attendance.)

3. *Supplemental Subjects*: The supplemental subjects of the course will in most cases consist of industrial applications of mathematics, industrial applications of science, industrial applications of drawing, industrial applications of English, and hygiene and sanitation.

In some courses shop work will be a supplemental subject.

In a course such as printing the most important of the supplemental subjects is English. Unless it can be demonstrated that the usual high school courses in English do not meet the needs of the printer, this subject will not be given special aid.

4. *Other Academic Subjects*: The academic subjects of the course, other than the supplemental subjects, should consist of English and literature, citizenship, development of modern democracy and democracies, development of the United States, and physical education.

5. *Industrial English*: The chief source for the material constituting the content of this subject should be the scientific and technical writings dealing with the processes and the products of the trade or industry. The formal side of the subject should consist largely of oral and written

³The sale of the product or of the time of the pupil while engaged in producing such product, to a school, city, or county department, or to a dealer or consumer, is the test of its marketable value.

composition including correspondence and business forms. The work in composition should be based upon the organization, business management, processes, products, and social life of the trade or industry.

6. *Industrial Applications of Science*: This subject should not include the systematic study of any of the sciences as a whole, nor should it conform to the requirements of a general science course. The science problems of the occupation should constitute the basic material for this work.

While physics and chemistry will have to be drawn upon in order to explain mechanical problems, systematic scientific studies in these fields should not be made, unless they become necessary for the understanding of the specific principles that underlie the explanations of these problems. In most cases these studies should be made at the time that the pupil is confronted with the practical problem.

7. *Industrial Applications of Mathematics*: This course will necessarily draw upon several of the mathematical subjects. The problems of science mentioned above will in many instances have to be solved by derived formulas. The derivation of such a formula should not be made a subject of study unless it is necessary in order to give a thorough understanding of its application. This study should be made at the time the formula is needed in the solution of the problem.

Process work in algebra should not go beyond fractional equations. Only such facts of geometry as are necessary for the solution of the mechanical problems of the trade or industry should be taught. In general, geometrical demonstrations should be omitted. Only such trigometrical functions as are applicable to the problems of the trade or industry should be considered, and they likewise, should be studied only in relation to their applications.

8. *Industrial Applications of Drawing*: While it may be necessary to give some drill in the principles underlying the subject of drawing, most of the work of the course should deal with problems growing directly out of the applied work. Attention should be given to free hand sketching as an instrument of creative expression. The work should be given in such manner as to develop in the pupils the power to clearly image contemplated products of the industry or trade.

9. *Hygiene and Sanitation*: Besides personal hygiene, first aid to the injured, recreation, etc., the course, if given in connection with an inside occupation, should provide for a study of shop sanitation. The course should include also municipal or community problems of sanitation.

10. *English and Literature*: Oral and written composition should be emphasized throughout the course. The topics discussed should be selected from concrete situations within the experiences of the pupils. Attention should be given also to the composition of business letters and documents.

In the beginning, the literature selected should be that commonly read by the pupils. The work in this line should be confined largely to a study of modern and current writings, since instruction in the classics rarely functions with pupils of this age and attainment.

11. *Citizenship*: This subject *should not* be construed to mean civics as generally comprehended and as usually taught. The purpose of the course should be to develop intelligent, aggressive citizens of the community, the State, and the Nation. It should develop within the pupils power for personal control in social relationship.

It should provide for a study of the institutions (legal, political, economic, educational, religious, fraternal, etc.) to which the pupils will have to adjust themselves, and should emphasize their social relationships to these institutions and to the members thereof.

The course should result in the production of personalities capable and willing to co-operate as members of such organizations, and should also create within the pupils an attitude of toleration toward all desirable social institutions and toward the beliefs and customs of the individual members of these.

Special emphasis should be placed on the attitude of the individual toward local, state, and national laws, and toward community customs.

The case method of instruction should be largely used. Generalizations should be arrived at through discussions of real problems of relationship between individual and individual, and individual and institution.

12. *Development of Modern Democracy and Democracies*: One aim of this subject is to instill in the hearts of the pupils the spirit of personal democracy, to break down the growth of class stratifications which are deadly to democratic institutions. The work in this phase of the subject should largely consist of a study of men of great achievement whose lives exemplify the spirit of personal democracy. Class discussions of the subjects, and also the application of the principle of democracy in the daily lives of the pupils, should constitute a part of the work.

The other aim of the subject is to develop, through an historical study, knowledge of, and sympathy for, the great modern world democracies and their peoples. This study should lead to an organ-

ization of the principles fundamental in the establishment and administration of the modern democratic state, and should create a background for the study of the subject, "The Development of the United States."

13. *Development of the United States*: The fundamental aim of this subject is to develop a love of country, an appreciation of our form of government, and a determination to support it at any cost. The study should lead to a comprehension of the fact that great masses of people cannot govern themselves and insure personal liberty without also restricting their liberties, that the thickly populated community with its diversified activities must restrict individual liberty more than the thinly populated community, that good citizenship today is a vastly different thing from good citizenship a half century ago.

Unfortunately in the study of the United States history, too often the tendency has been to teach chronologically by periods, and to emphasize these periods in direct proportion to their remoteness.

The teacher of this subject should select the important industrial, commercial, political, and other social problems of the day, and teach them in their historical settings. In so doing he should turn upon them not only the searchlight of the past but also the searchlight of the current experiences of other great world democracies. The instruction should lead the pupils to realize fully the fact that as population becomes more congested, more restrictions must be placed upon the individual in order to protect him from exploitation by the unscrupulous.

14. *Physical Education*: In this subject the work must conform to the requirements of the State Department of Physical Education. However, attention is directed to the importance of having every pupil who takes this course engage in some co-operative form of play activity. Exercises should be provided also to relieve fatigue and to prevent possible deformities that may result from abnormal postures, or from activities attendant upon the school and shop work.

15. *Content and Method*: The selection of material, which shall compose the content of each subject of the course, and the methods of presentation, must be governed by the vocational needs and the capacities of the pupils.

16. *Type Course*: The following is a type course of study applicable to such occupations as carpentry and mill cabinet work, automobile repair, and machine shop:

SUBJECTS OF COURSE	Units of work				
	Four years	First year	Second year	Third year	Fourth year
Applied work (special aid allowed)-----	8	2	2	2	2
Supplemental subjects (special aid allowed):					
Industrial English -----	$\frac{1}{2}$	$\frac{1}{2}$	-----	-----	-----
Industrial applications of science-----	$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	-----
Industrial applications of mathematics-----	2	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Industrial applications of drawing-----	1	$\frac{1}{2}$	-----	-----	$\frac{1}{2}$
Hygiene and sanitation-----	$\frac{1}{2}$	-----	-----	-----	$\frac{1}{2}$
Other required academic subjects (no special aid allowed):					
English and literature-----	1	-----	$\frac{1}{2}$	$\frac{1}{2}$	-----
Citizenship -----	$\frac{1}{2}$	-----	$\frac{1}{2}$	-----	-----
Development of modern democracy and democracies -----	$\frac{1}{2}$	-----	-----	$\frac{1}{2}$	-----
Development of the United States-----	$\frac{1}{2}$	-----	-----	-----	$\frac{1}{2}$
Physical education -----	-----	-----	-----	-----	-----
Totals -----	16	4	4	4	4

While this course is not absolutely prescribed, in general, courses in the occupations mentioned must conform closely to this plan. The outline of the course submitted with the application to establish the work, should contain a chart of subjects similar to the above.

17. *Separate Classes* in all applied and supplemental subjects must be maintained for pupils pursuing these courses; provided, that by previous agreement with the State Board, pupils of vocational courses in closely related trades or industries may, in some instances, be taught in the same class.

Pupils belonging to different years of a given vocational course may be instructed in the same class.

No class in Federal and State aided subjects shall at any time consist of more than twenty pupils.

18. *Individual Instruction*: The individual task rather than the class method of instruction shall prevail in supplemental and other academic as well as in applied subjects.

19. *Individual Standard*: No uniform minimum standard shall be required for the completion of any of the subjects of the course, but a certificate issued on a blank furnished by the State Board of Education shall be given to each pupil completing a year's work. Said certificate shall contain the pupil's correct rating in percentages in all subjects of the course.

20. *Admission Requirements*: Any person of either sex over fourteen years of age who may be able to profit by the work of the course, without regard to scholarship or grade of school previously attended, shall be admitted thereto.

21. *Advanced Standing*: A pupil belonging to another course, who desires to prepare himself as a skilled worker in a trade or industry, may, with the approval of the teacher in charge of the course preparing for such trade or industry, receive such credit for previous practical experience or class-room instruction as said teacher in charge may deem advisable. Such pupil may thereupon be admitted to advanced standing in the course, provided that he shall be required to pursue the practical shop work of the course, unless he is able to present a satisfactory equivalent in previous practical experience or training.

22. *Teachers of Applied Work*: A teacher holding a vocational certificate in the industry or trade for which the course is designed to prepare, shall give all instruction in the applied work; and such a teacher may teach any or all of the supplemental subjects of the course.

23. *Teachers of Other Subjects*: A teacher holding a special certificate to teach any one of the supplemental subjects may instruct in said subjects, or a teacher holding a general high school certificate and, in addition thereto, a State Board credential authorizing certification in any of these subjects may instruct in the same.

A teacher holding a regular high school certificate may give instruction in any of the other academic subjects of the course; and a teacher holding a special certificate to teach any of the special subjects may give instruction in such special subjects.

24. *Teacher in Charge*: One of the teachers of applied work mentioned under 22 above, must be given general charge of the course and must be made responsible, under the direction of his superior officers, for all instruction provided for the pupils of the course.

25. *Equipment*: The high school board must provide the shops, laboratories, classrooms, equipment, and supplies deemed necessary by the State Board of Education for successfully carrying out the instruction contemplated in these courses.

26. *Expenditures*: Said board must expend for the maintenance of each course, including teachers' salaries, overhead and other current

expenses, an amount, the ratio of which shall be not less than fifteen hundred dollars (\$1500) per annum for each class organization.

DIVISION B.

Part-time Co-operative Trade and Industrial Courses.

Part-time co-operative trade and industrial courses may be one or two years in length. In addition to the provisions and restrictions set forth under the foregoing topics, "Amount of Federal and State Special Aid Offered," and "Application to Establish Standard, Full-time, Co-operative, and Special Part-time and other Courses or Classes in Trade or Industrial Subjects; and General Continuation Classes," each course must be established and administered in accordance with the following regulations:

1. *Division of Time*: Not less than three hours per day of each pupil's time must be devoted to supplemental and other academic work in class or school, and not less than three hours per day to employment as an apprentice in the trade or industry for which he is preparing; provided, that if an equivalent amount of time be given to each, the academic and the practical work may be planned to alternate daily, weekly, or biweekly.

2. *Applied Work*: The applied or apprenticeship work of the pupil must be organized in the best possible manner consistent with reasonable productive efficiency, to provide educational growth, and said work must be open at all times to the inspection of a properly certificated teacher who shall act as co-ordinator of shop and school work.

3. *Supplemental and Other Academic Subjects*: Supplemental applied work may be given in this course. The academic and supplemental subjects of instruction must be similar in character to those outlined under subdivisions 3 to 16, inclusive, *Division A* above.

Recitations must be conducted in at least two of these subjects on each day that the pupils attend the school. Where the supplemental and applied work alternates weekly or biweekly, recitations must be conducted in at least four of said subjects on all days that the pupils attend school.

4. *Content and Method*: The selection of material which shall compose the content of each subject of the course, and the methods of presentation, must be governed by the vocational needs and the capacities of the pupils.

5. *Separate Classes* in all supplemental and applied subjects must be maintained for pupils pursuing this course; provided, that by previous agreement with the State Board, pupils of full-time vocational courses and pupils of co-operative vocational courses in the same occupation, or

pupils pursuing courses in closely related trades or industries, may in some instances, be taught in the same classes.

Pupils belonging to different years of this course may be instructed in the same classes.

No class in Federal and State aided subjects shall at any time consist of more than twenty pupils.

6. *Individual Instruction*: The individual task rather than the class method of instruction shall prevail in all of the subjects of the course.

7. *Individual Standard*: No uniform minimum standard shall be required for the completion of any of the subjects of the course, but a certificate issued on a blank furnished by the State Board of Education shall be given to each pupil completing a year's work. Said certificate shall contain the pupil's correct rating in percentages in all subjects of the course.

8. *Admission Requirements*: Subject to the Child Labor Laws of this state, any person of either sex over fourteen years of age who may be able to profit by the work of the course, without regard to scholarship or grade of school previously attended, shall be admitted thereto.

9. *Co-ordinator*: A teacher holding a certificate of the vocational arts type, secondary grade, authorizing him to act as co-ordinator in the special field, or a teacher holding a regular certificate of secondary grade, and in addition thereto a State Board credential of secondary grade authorizing certification as co-ordinator in this special field, shall be given charge of each course organized under this division.

10. *Teachers of Other Subjects*: A teacher holding a special certificate to teach in one of the supplemental subjects may instruct in said subject, or a teacher holding a general high school certificate and, in addition thereto, a State Board credential authorizing certification in any of these subjects may instruct in the same.

A teacher holding a regular high school certificate may give instruction in any of the other academic subjects of the course; and a teacher holding a special certificate to teach any of the special subjects may give instruction in such special subjects.

11. *Equipment*: The high school board must provide the shops, laboratories, equipment, and supplies deemed necessary by the State Board of Education for successfully carrying out the instruction contemplated in these courses.

12. *Expenditures*: Said board must expend for the maintenance of each course, including teacher's salaries, overhead, and other current expenses, an amount, the ratio of which shall be not less than fifteen hundred dollars (\$1500) per annum for each class organization.

13. *Counting Attendance*: The attendance of pupils upon part-time, co-operative courses shall be kept as provided in the regulations of the State Board of Education. (See Regulations of the State Board of Education School Law 1917, page 323.)

DIVISION C.

Full-time Day Home Economics Courses.

Full-time day home economics courses must be not less than one and not more than two years in length.

In addition to the provisions and restrictions set forth under the above topics, "Amount of Federal and State Aid Offered," and "Application to Establish Full-time and Part-time Home Economics Courses and Classes," each course must be established and administered in accordance with the following requirements:

1. *Division of Time*: Not less than three hours per day of each pupil's time must be devoted to applied work at school in household occupations, and not less than three hours per day to academic work at school, provided that at least one-half of the entire time of instruction shall be devoted to applied work.

2. *Applied Subjects*: Among other things, the course must provide for applied work in home food preparation, preservation, and service; home sewing, including the construction and repair of clothing, linen, and other articles; millinery for women and children; home laundering; home gardening; home nursing; home invalid cooking; and house-keeping.

3. *Supplemental Subjects*: The supplemental subjects of the course shall consist of the study of fabrics; textile, dress, and millinery designing; house planning; interior and furniture designing; interior decoration and furnishing; hygiene and sanitation; household science; dietetics; home economy and accounting; citizenship; household English; home reading, and physical education.

4. *Food Preparation, Preservation, and Service*: The work in this field shall consist of the cooking, canning, and drying of foods. Experience shall be provided also in table service which shall emphasize the needs and practices of the home with a small income where the homekeeper must act as cook, maid, butler, hostess, and mother.

5. *Home Sewing*: In this subject, the work shall consist of the making of clothing, linens, and other household articles ordinarily constructed in the home. Special emphasis should be placed upon the construction and selection of children's clothing. The repair of clothing and household fabrics should also receive attention.

6. *Millinery*: The principles involved in the selection and construction of forms and the trimming of hats and bonnets for women and children should constitute a large part of the work of the course. Attention should be given to the renovation of trimmings and the reconstruction of hats and bonnets.

7. *Laundrying*: The processes of washing, drying, and ironing the different kinds of garments, household linens, and other fabrics; the removal of stains; the cleansing of suits, fine fabrics, laces, feathers, etc., should constitute the practical side of this subject.

8. *Home Gardening*: The course in home gardening should consist of the planting and cultivating of the vegetables common to the kitchen garden and the flowers common to the home yard. Practical work in plant propagation also should be given.

9. *Home Nursing*: The work of this course should include the cleaning, disinfecting, ventilating, and general preparation of the room for the reception of the patient, and its care while being used. It should also include instruction in the making of beds, in first-aid, and in the handling of a helpless patient. Among other things, the pupils should be taught how to take the patient's pulse and temperature and how to feed and bathe him.

10. *Home Invalid Cooking* should include the selection, preparation, and service of suitable foods for invalids and convalescents.

11. *Housekeeping*: Sweeping, dusting, vacuum cleaning, window washing, and metal cleaning should all be practiced. The different methods used in the cleaning of finished and unfinished woods should be studied. Instruction should be given in the care and making of beds, and in the cleaning, care, and repair of interiors and household equipment. Special emphasis should be placed upon the planning of the work of the household in order that the greatest economy consistent with good service may be secured.

12. *Study of Fabrics*: The study of fabrics should include a study of fibers, tests for purity, processes of manufacture, and the identification and economical use of the different fabrics.

13. *Textile, Dress, and Millinery Designing*: The work in this field should consist of the application of linear and color design in costuming. The pencil and brush should be used in illustrating the proper dress for persons of different physical characteristics. Such work should be given in textile design as will enable the individual to exercise intelligent choice in the matter of materials.

14. *House Planning*: The choice of site, the methods of financing building operations, and the different kinds of available building materials should be subjects for study. Simple sketches of floor plans

and elevations should be made to express the best possible arrangement to meet the factors of sunlight, street exposure, surrounding landscape and proper furniture arrangement.

15. *Interior and Furniture Design*: This course should include a study of lines, mass, etc., as they relate to furniture and style of interior finish.

16. *Interior Decoration and Furnishing* should include the study of problems of decoration with given interiors, and problems of furniture types that should be selected in order to produce an harmonious whole. The decorative phases of the work should deal with the application of color and line to ceilings, walls, rugs, draperies, etc., and the furnishing phases of the subject should deal with the study of different styles of furniture in their proper settings. These studies should all be made on the basis of the application of a given budget.

17. *A Course in Hygiene and Sanitation* should deal with both personal hygiene and household sanitation. In handling the personal hygiene, only such physiology should be studied as contributes directly to the intelligent care of the body. The sanitation of the home should include a study of all phases of this subject, such as light, ventilation, heat, plumbing, disposal of garbage, proper care of bedding, linen, etc. It should include also a study of the problems of community sanitation particularly as they react upon the home.

18. *Household Science*: The work in this field should not be confused with any of the usual high school science courses. Only the principles of science necessary for the solution of the common problems of the home should be taken up in this course.

The heat values of fuels; the laws of combustion; the chemical composition of foods, baking powders, and food preservatives; washing agents; dyeing materials; and the composition of utensils, yeasts and molds, etc., should be studied in the order in which their use arises in the course or in the order of their importance to the housewife. In order that the pupils may be able to handle the mathematical formulas, it may be necessary to give instruction in the use of fractional equations.

19. *Dietetics* should include the study of food values, balanced rations, and economy of nutrition as these facts relate to the nourishment of children, adults, the aged, and the indisposed. It may be necessary to give some special drill in the handling of decimal fractions in order that the pupils may make the necessary computations.

20. *Home Economy and Accounting*: This subject naturally falls into two divisions: The first division has to do with relative values and involves the question of choice as to how the income shall be expended.

This includes a choice as to the investment that shall be made for shelter, clothing, and foods—not only this—it includes such questions as choice of clothing for father, mother, and children; also the choice of foods on the basis of their nutritive value and cost. In fact, every contemplated expenditure of the housewife should be made on the basis of relative needs and relative values.

The second division has to do with the setting up of a system of accounting which will enable the housewife to keep a proper balance of expenditures for different purposes. This phase of the subject should be handled through type studies of the annual budgets of families with various incomes.

21. *Citizenship*: The content of this course should be similar to that outlined under *Subdivision 11, Division A, Part II*, of this bulletin. The course should, however, emphasize an additional feature, that is the means whereby the home-maker may train the children at home, for the type of citizenship contemplated in the above mentioned course.

22. *Household English*: In this course emphasis should be placed upon oral and written composition, including letter writing and business forms dealing with home occupations and current topics of the day.

23. *Home Reading*: The home reading period should deal with two types of literature: one to include that type of material, current and permanent, which is common to the average American home; the other to include children's literature. The work in this field should include not only the selection of the best literature, but also training in story telling.

24. *Physical Education*: In this subject the work must conform to the requirements of the State Department of Physical Education.

25. *Content and Method*: The selection of the material which shall compose the content of each subject or each topic of this course, and the methods of presentation must be governed by the vocational needs and capacities of the pupils.

26. *Separate Classes* must be maintained for the pupils of this course. Pupils belonging to different years of the course may be instructed in the same class.

No class in the course shall at any time consist of more than twenty pupils.

27. *Individual Instruction*: The individual task rather than the class method of instruction shall prevail in supplemental as well as in applied subjects.

28. *Individual Standard*: No uniform minimum standard shall be required for completion of any of the subjects of the course, but a certificate, issued on a blank furnished by the State Board of Education

shall be given to each pupil completing a year's work. Said certificate shall contain her correct rating in percentages in all subjects composing the course.

29. *Admission Requirements:* Any girl or woman over fourteen years of age, who may be able to profit thereby, without regard to scholarship or grade of school previously attended, shall be admitted to the course.

30. *Teachers:* Instruction in all of the supplemental and applied subjects of this course may be given by teachers holding special certificates in household science and household arts, and any single subject of the course may be taught by a teacher holding a special certificate in that subject.

31. *Equipment:* High school boards must provide the model house-keeping apartments, laboratories, classrooms, equipment, and supplies deemed necessary by the State Board of Education for carrying out the instruction contemplated in this course.

32. *Expenditures:* Said board must expend for the maintenance of each course, including teachers' salaries, overhead and other current expenses, not less than fifteen hundred dollars (\$1500) per annum for each class organization.

DIVISION D.

Part-time and Other Special Day Vocational Classes in Trades, Home Economics, and Industries.

While special classes maintained between 6 a.m. and 6 p.m. are, according to section 1750c of the Political Code, day classes, they are not so classified by the Federal Act.

The State Board of Education will not aid any part-time or other special class unless the major portion of each daily session falls between the hours of 6 a.m. and 6 p.m.

Where the whole or a major portion of each session of such a class is conducted during the usual working time of the pupils belonging to the same, it will be considered a part-time class, and where it does not meet this requirement, it will be considered an evening class and will be aided as such.

Part-time and other special day vocational classes must provide for not less than 144 hours of classroom instruction per annum.

In addition to the provisions set forth under the foregoing "Amount of Federal and State Special Aid Offered," and "Application to Establish Standard Full-time, Co-operative, Part-time, and Other Courses or Classes in Trade or Industrial Subjects; and General Continuation Classes," or "Application to Establish Full-time and Part-time Standard Home Economics Courses and Classes," each course must be

established and administered in accordance with the following regulations:

1. *Subjects of Instruction*: Instruction may be given only in such subjects as will increase skill or knowledge in the occupation in which the worker is engaged as his daily employment, or as will lead to promotion or advancement in that work.⁴

While supplemental applied work in trades and industries may be given, the subjects of instruction will for the most part consist of trade and industrial applications of mathematics, science, drawing, English, or hygiene and sanitation. The content of these subjects should be similar to that set forth under subdivisions 5 to 9, inclusive, *Division A, Part II* of this document.

In *home economics*, any of the following subjects may be taught: food preparation, preservation and service; home sewing, including the making and repairing of clothes, linens and other articles; millinery for women and children; home laundering; home gardening; home nursing; home invalid cooking; housekeeping; the study of fabrics; textile, dress and millinery designing; house planning; interior and furniture designing; interior decoration and furnishing; hygiene and sanitation; household science; dietetics; home economy and accounting.

While the content of these subjects should be similar to that outlined under *Division C, Part II* of this document, the selection of material to compose the subjects and the methods of presentation, must be governed by the vocational needs and the capacities of the pupils.

One or more of these subjects may constitute the entire work of a class.

2. *Separate Classes* must be provided for the pupils of these courses, provided that by previous agreement with the State Board, pupils in closely related trades or industries may in some instances be taught in the same class.

No class maintained under this division shall at any time consist of more than 20 pupils.

3. *Individual Instruction*: The individual task rather than the class method of instruction shall prevail in supplemental as well as in applied subjects.

4. *Individual Standard*: No uniform minimum standard shall be required for the completion of the work in any subject, but a certificate issued on a blank furnished by the State Board of Education shall be given to each pupil completing a year's work. Said certificate shall contain the pupil's correct rating in percentages in all subjects.

5. *Admission Requirements*: There shall be no scholarship restrictions on entrance to any course established under this Division.

⁴Commercial courses may not be established under this division.

Any employed person over 16 years of age who may be able to profit by such a course shall be admitted to classes maintained outside of the regular working hours of the pupils, and any such person over 14 years of age shall be admitted to any class maintained within the usual working hours of the pupils.

6. *Teachers of Trades and Industries*: A teacher holding a vocational certificate in the industry or trade for which the course is designed to train, shall give all instruction in the applied work; and such a teacher may teach any or all of the other supplemental subjects.

A teacher holding a special certificate to teach any of the supplemental subjects may instruct in such subjects, or a teacher holding a general high school certificate and, in addition thereto, a State Board Credential authorizing certification in any of these subjects may instruct in the same.

7. *Teachers of Home Economics*: Instruction in all of the supplemental and applied subjects of the home economics course may be given by teachers holding special certificates in household science and art, and any single subject of the course may be taught by a teacher holding a certificate of household arts type or of vocational arts type in that subject.

8. *Equipment*: High school boards must provide the model house-keeping apartments, laboratories, classrooms, equipment, and supplies deemed necessary by the State Board of Education for carrying out the instruction contemplated in each line of work.

9. *Expenditures*: Said Board must expend for maintenance, including teachers' salaries, overhead, and other current expenses, an amount which shall average not less than \$100 for each pupil unit of average daily attendance.

10. *Counting Attendance*: The attendance upon such classes must be kept as provided for special day classes in section 1858 of the Political Code, School Law, 1917, page 235.

DIVISION E.

Part-time General Continuation Classes in Civic and Vocational Subjects.

These classes are intended for employed persons of high school age who are not engaged in skilled occupations.

Persons of this age engaged in skilled occupations should be provided for in classes organized under *Division D*.

Part-time general continuation classes must provide for not less than 144 hours of classroom instruction per annum.

In addition to the provisions set forth under the foregoing topics, "Amount of Federal and State Special Aid Offered," and "Application to Establish Standard Full-time, Co-operative, Part-time, and

Other Courses or Classes in Trade or Industrial Subjects; and General Continuation Classes," each course must be established and administered in accordance with the following regulations:

1. *Subjects of Instruction*: Not less than one-half of the class time must be devoted to instruction in applied trade, home economics, industrial, commercial or other vocational subjects.

The remainder of the class time should be devoted to such drawing, mathematics, science and English as is demanded by the applied work and the occupation to which it leads, and, in addition thereto, instruction may be given in hygiene and sanitation, morals and manners, and the essential facts of good citizenship as applied to every day life.

2. *Content and Method*: Under no condition should these classes attempt to duplicate the content of the subjects or the usual methods of instruction of the elementary school.

Where the daily employment of a pupil brings him into contact with an occupation that offers opportunity for education, all of his applied and most of his academic work should be planned to supplement the experience gained in such contact. The applied work in industrial home economics, trade, and commercial subjects, should not be symbolical but should yield a useful or marketable product.

The content of the supplemental subjects should be similar to that set forth under subdivisions 5 to 9, inclusive, *Division A*.

All subjects of instruction should be adjusted to the individual needs of the pupils.

3. *Separate Classes* must be maintained for the pupils of these courses, provided, that by previous agreement with the State Board, pupils in closely related trades or industries may be taught in the same class.

No class maintained under this Division shall at any time consist of more than 20 pupils.

4. *Individual Instruction*: The individual task rather than the class method of instruction shall prevail in supplemental as well as in applied subjects.

5. *Individual Standard*: No uniform minimum standard shall be required for the completion of the work in any subject but a certificate issued on a blank furnished by the State Board of Education shall be given to each pupil completing a year's work. Said certificate shall contain the pupil's correct rating in percentages in all subjects.

6. *Admission Requirements*: There shall be no scholarship restriction on entrance to any course established under this Division.

Any person over 14 and under 18 years of age not in full attendance on a day school who may be able to profit by such a course shall be admitted thereto.

7. *Teachers of Applied Subjects*: All of the subjects of any course under this Division may be taught by a teacher holding a special certificate covering the vocational field that constitutes the applied work of the course.

8. *Teachers of Other Subjects*: Any of the supplemental or other academic subjects may be taught by a teacher holding a regular high school certificate or by a teacher holding a special industrial or trade certificate in said subject.

9. *High School Boards* must provide the model housekeeping apartments, laboratories, classrooms, equipment and supplies deemed necessary by the State Board of Education for successfully carrying out the instruction contemplated in these classes.

10. *Expenditures*: Said Board must expend for maintenance, including teachers' salaries, overhead and other current expenses, an amount which shall average not less than \$100 for each pupil unit of average daily attendance.

11. *Counting Attendance*: The attendance upon such classes must be kept as provided for special day classes in section 1858. of the Political Code, School Law, 1917, page 235.

PART III.

PROVISIONS AND REQUIREMENTS OF FEDERAL AND STATE ACTS RELATING TO VOCATIONAL COURSES IN AGRICULTURE; FULL-TIME, PART-TIME AND OTHER—TRADE, HOME ECONOMICS, AND INDUSTRIAL COURSES AND CLASSES; AND PART-TIME GENERAL CONTINUATION CLASSES.

These provisions and requirements have been included in the regulations of the State Board of Education appearing in Parts I and II of this document.

Regulations Common to All of the Above Mentioned Courses and Classes.

1. Funds received under provisions of Federal and State Acts must be applied to salaries of teachers of agriculture, trade, home economics, and industrial subjects, or teachers of general continuation classes.

2. Courses and classes must be established and maintained under general regulations prescribed by State Board of Education and approved by the Federal Board.

3. Work must be conducted under supervision of State Board of Education.

4. Courses and classes can be maintained only in schools under public supervision and control.

5. The controlling purpose of such education must be to fit for useful employment.

6. Such education must be of less than college grade.

7. All courses must be designed to meet the needs of persons over fourteen years of age who have entered upon or who are preparing to enter upon the work of farm or farm home, or a trade or industrial pursuit; and instruction in part-time general continuation classes must be designed to meet the needs of persons over fourteen and under eighteen years of age, who have entered upon employment.

8. Local communities must provide the minimum plant and equipment prescribed by State Board of Education and approved by the Federal Board.

9. High school districts must expend annually for the maintenance of such courses the minimum amount prescribed by the State Board of Education and approved by the Federal Board.

10. Teachers must have minimum qualifications determined by the State Board of Education and approved by the Federal Board.

Regulations Common Only to Agriculture,

High school districts must provide for directed or supervised agricultural practice by the pupils for a period of at least six months each year.

Regulations Common Only to Trade Home Economics, and Industrial Courses.

1. The subjects taught in part-time general continuation classes must be such as will enlarge the civic or vocational intelligence of the pupils.

2. Each year of a full-time day vocational course must provide not less than thirty hours of instruction per week for a period of not less than thirty-six weeks and all part-time classes must provide for not less than one hundred forty-four hours of classroom instruction per year.

3. Evening industrial schools shall fix the age of sixteen years as a minimum entrance requirement and shall confine instruction to that which is supplemental to the daily employment of the pupils.

PROVISIONS AND REQUIREMENTS OF SECTION 1750c OF THE POLITICAL CODE OF CALIFORNIA RELATING TO STANDARD VOCATIONAL COURSES IN AGRICULTURE AND PART-TIME CO-OPERATIVE TRADE AND INDUSTRIAL COURSES.

1. Each pupil pursuing a part-time course in any of the above mentioned subjects must devote at least three hours daily or an equivalent amount of time to practical work. If in agriculture, this time shall be devoted to farm mechanics and to farm project work conducted by him on a commercially productive basis, and if in industry or trade, it shall be devoted to educative practical work under employment.

2. Each such pupil must also devote at least three hours daily or *an equivalent* amount of time to academic work in school or class, a part of which shall supplement the practical work mentioned above.

3. The law indirectly establishes a minimum school day of six hours for all such pupils.

4. The above practical work must be conducted under the direct supervision of a teacher holding a special certificate. If in agriculture, said certificate shall be of the vocational or technical arts type, and if in a trade or industry, said certificate shall be of the vocational arts type.

PART IV.

ESTIMATED FUNDS AVAILABLE FOR THE PROMOTION OF VOCATIONAL EDUCATION IN CALIFORNIA.

The figures for the years 1921-22 and thereafter are approximations based upon the 1910 census.

	1918-19	1919-20	1920-21	1921-22	1922-23	1923-24	1924-25	1925-26 and annually thereafter
Agriculture—for salaries of teachers, directors and supervisors:								
From Federal sources.....	\$13,796 82	\$18,395 76	\$22,964 70	\$27,563 64	\$32,192 58	\$36,791 52	\$45,989 40	\$55,187 28
From State sources.....	13,796 82	18,395 76	22,964 70	27,563 64	32,192 58	36,791 52	45,989 40	55,187 28
Total fund	\$27,593 64	\$36,791 52	\$45,989 40	\$55,187 28	\$64,385 16	\$73,583 04	\$91,978 80	\$110,374 56
Trade, home economics and industry— for salaries of teachers:								
From Federal sources.....	\$26,063 94	\$34,751 92	\$43,439 90	\$52,127 88	\$60,815 86	\$69,503 84	\$86,879 80	\$104,255 76
From State sources.....	26,063 94	34,751 92	43,439 90	52,127 88	60,815 86	69,503 84	86,879 80	104,255 76
Total fund	\$52,127 88	\$69,503 84	\$86,879 80	\$104,255 76	\$121,631 72	\$139,007 68	\$173,759 60	\$208,511 52
Maximum amount that may be ap- plied to home economics.....	\$10,425 58	\$13,900 77	\$17,375 96	\$20,851 15	\$24,326 95	\$27,801 54	\$34,751 92	\$41,702 30
Minimum amount that may be ap- plied to part-time instruction.....	17,375 96	23,167 95	28,959 93	34,751 92	40,543 91	46,335 89	57,919 87	69,503 84
Maximum amount that may be ap- plied to other than part-time in- struction	34,751 92	46,335 90	57,919 86	69,503 84	81,087 81	92,671 78	115,839 73	139,007 68

Teacher training—for salaries and maintenance:										
From Federal sources-----	\$18,160 87	\$23,349 69	\$25,944 41	\$25,944 41	\$25,944 41	\$25,944 41	\$25,944 41	\$25,944 41	\$25,944 41	\$25,944 41
From State sources-----	18,160 87	23,349 69	25,944 41	25,944 41	25,944 41	25,944 41	25,944 41	25,944 41	25,944 41	25,944 41
Total fund -----	\$36,321 74	\$46,699 38	\$51,888 82	\$51,888 82	\$51,888 82	\$51,888 82	\$51,888 82	\$51,888 82	\$51,888 82	\$51,888 82
Minimum amount that may be applied to the training of teachers for any one of the following: agriculture, home economics, or trade and industry-----										
	\$7,264 85	\$9,339 88	\$10,377 76	\$10,377 76	\$10,377 76	\$10,377 76	\$10,377 76	\$10,377 76	\$10,377 76	\$10,377 76
Maximum amount that may be applied to the training of teachers for any one of the following: agriculture, home economics, or trade and industry-----										
	21,798 04	28,019 63	31,133 29	31,133 29	31,133 29	31,133 29	31,133 29	31,133 29	31,133 29	31,133 29
Grand totals:										
From Federal Sources-----	\$58,021 63	\$76,497 37	\$92,379 70	\$105,665 62	\$118,952 54	\$132,239 46	\$158,813 30	\$185,987 14	\$217,626 60	\$250,774 28
From State sources-----	58,021 63	76,497 37	92,379 70	105,665 62	118,952 54	132,239 46	158,813 30	185,987 14	217,626 60	250,774 28
Grand totals both sources-----	\$116,043 26	\$152,994 74	\$184,758 40	\$211,331 24	\$237,905 08	\$264,478 92	\$317,626 60	\$371,974 28	\$435,603 20	\$501,548 48

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DOCUMENT III.

REQUIREMENTS FOR TEACHERS OF VOCATIONAL SUBJECTS UNDER THE PROVISIONS OF THE FEDERAL AND STATE VOCATIONAL EDUCATION ACTS.

GENERAL STATEMENT.

1. No person may teach any subject in a California school, with or without pay, except the holder of a teacher's certificate.

2. With certain restrictions as to minimum scholastic and vocational requirements the California law places the entire matter of the certification of high school teachers, both general and special, in the hands of the State Board of Education, which is the State Board for the administration of vocational education under the Federal Act.

3. The minimum legal requirement for a general high school certificate is a diploma of graduation from the University of California or other university or college of equal rank, as determined by the State Board of Education. In addition to this the State Board of Education prescribes for such certificate a year of graduate work taken in a standard college. The collegiate course must include at least fifteen units of pedagogy and practice teaching.

4. For all certificates in special subjects the State Board of Education requires eight years of schooling beyond an elementary school course, or an equivalent as prescribed by it. At least one-half of the last four years of instruction must be devoted to study or work in the special subject and to pedagogical training. The Board requires that twelve of the above sixty units shall be devoted to pedagogical study which shall include practice teaching in the special subjects.

SPECIAL REQUIREMENTS FOR TEACHERS.

The requirements for teachers of vocational subjects prescribed in the "General Regulations of the State Board of Education for the Establishment and Maintenance of Federal and State Aided Vocational Education in California" are as follows:

DIVISION I.

Teachers of Agricultural Subjects.

1. *Teachers of Project Work*: Only two general types of teachers will be accepted as instructors of agricultural project work. One of these types is represented by the technically trained teacher and the other by the teacher with less technical training, but with wide experience in farming.

The technically trained type includes graduates of standard agricultural colleges, who have had at least eight years of schooling beyond a full elementary school course, at least twelve units of pedagogical training including practice teaching, and at least ten months of farm experience secured after the age of eighteen; or an equivalent training and experience to be determined by the State Board of Education.

For the present, the Board will accept farm experience secured in vacation periods during the collegiate course of instruction; and if the demand for teachers warrants the same, the Board will accept additional farm experience in lieu of the above pedagogical requirement.

The experienced type includes:

a. Persons who have had at least four years of schooling beyond the eighth grade of an elementary school course, and at least six years of farm experience secured after the age of eighteen, who give evidence of being familiar with scientific methods of farming, and who have completed a satisfactory course in the classes for the training of vocational teachers of agricultural subjects set up under the Federal and State Vocational Education Acts.

b. Persons who have had six years of such schooling and at least four years of such farm experience, who give evidence of being familiar with scientific methods of farming, and who have had the special training outlined under *a* above.

c. Persons who, in the judgment of the State Board of Education, have had a combination of training and experience equivalent to the requirements specified under *a* and *b*.

2. *Teachers of Supplemental Subjects*: The farm mechanics and other supplemental subjects of the course may be taught by the agricultural instructors mentioned above, or they may be taught by other qualified high school teachers especially certificated by the State Board of Education to teach said supplemental subjects.

DIVISION II.

Teachers of Trade and Industrial Subjects.

1. *Teachers of Applied Work*: Only two general types of teachers will be accepted as instructors of applied work. One of these types is represented by the widely experienced craftsman and the other by the technically trained teacher.

a. The experienced type includes persons twenty-five years of age or over who have had a minimum of three years of experience as journeymen workers, or—where this terminology does not apply—its equivalent, in the vocations which they expect to teach, and in addition thereto, at least an elementary school education;

and who have satisfactorily completed the work of the classes for the training of vocational teachers of trades and industries set up under the Federal and State Vocational Education Acts.

In regions of the state remote from these training classes, or in case there is a shortage of teachers for this work, the special training specified above may be temporarily waived.

b. The technically trained type includes persons who have had at least two years of vocational experience in their special fields and who have completed college courses in architecture, civil, mechanical, electrical, steam, gas, mining or marine engineering in standard universities or colleges that maintain for graduation at least four-year courses beyond the four-year high school preparatory course.

2. *Teachers of Supplemental Subjects*: The supplemental subjects of the course may be taught by the teachers of applied subjects mentioned above or they may be taught by other qualified high school teachers especially certificated by the State Board to teach said supplemental subjects.

DIVISION III.

Teachers of General Continuation Classes in Civic and Vocational Subjects.

1. *Teachers of Applied Work*: Teachers of applied industrial or trade subjects shall have the qualifications specified under *Division II* of this document for teachers of applied work in trades and industries. Teachers of household arts subjects shall have the qualifications specified under *Division IV* of this document. Teachers of commercial subjects shall hold certificates of the commercial type described under the requirements set forth in the general statement of this document.

2. *Teachers of Other Subjects*: Teachers of supplemental or other academic subjects of instruction shall hold certificates such as those described under 1 above, or regular high school certificates, or special certificates based upon credentials, issued by the State Board of Education on teachers' certificates and satisfactory evidence of special fitness for this work.

DIVISION IV.

Teachers of Home Economics Subjects.

Teachers of Home Economics Subjects: Two types of teachers will be accepted as instructors of home economics subjects. One of these types is represented by the technically trained teacher and the other by the teacher with trade experience.

1. The technically trained type includes persons who have had at least eight years of schooling beyond an elementary school course, one and three-fifths years of instruction in home economics, and two-fifths of a year of instruction in pedagogical subjects, including practice teaching, or an equivalent as prescribed by the State Board of Education. Under certain conditions, the State Board of Education accepts, at half value, teaching experience in lieu of two years of the above eight year general requirement. Upon investigation, and written and oral examination, it also accepts practical experience in household occupations, at half value, in lieu of two years of the eight year requirement mentioned above. The teachers of this type are authorized to teach any of the subjects of a home economics course.

2. The experienced type includes teachers of dressmaking, millinery, nursing, etc., who meet the requirements set forth for trade and industrial teachers, in *paragraph a, subdivision 1 of Division II* of this document.

These persons will be authorized to instruct in all the subjects which they are qualified by certificate to teach.

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DOCUMENT IV.

PLAN FOR THE SUPERVISION OF VOCATIONAL COURSES IN AGRICULTURE UNDER THE PROVISIONS OF THE FEDERAL AND STATE VOCATIONAL EDUCATION ACTS.

The State Board of Education herewith sets up the following plan for the supervision of vocational courses in agriculture:

Employment of State Supervisor.

The Board plans to employ a State Supervisor of Agricultural Instruction, and to pay one-half of his salary from the funds provided under section 2 of the Federal Act.

Qualifications of Supervisor.

The qualifications of the State Supervisor of Agricultural Instruction shall be as follows:

1. He shall be able to qualify for a special certificate of the technical or vocational arts type as specified under Division I of Document III of this bulletin.

2. He shall have had successful first hand experience in farm work, and in the management of a farm.

3. He shall have had experience in teaching agricultural subjects in a school of secondary grade.

4. If possible, he shall have had educational administrative experience.

Duties of Supervisor.

It shall be the duty of the State Supervisor of Agricultural Instruction:

1. To counsel with local boards of education, superintendents, principals, and teachers on the subject of vocational agricultural education, and to explain to them the plan of operation of the Federal Act for Vocational Education as applied to the field of agriculture in the State of California.

2. To promote by visitation and public discussion the establishment of vocational courses in agriculture throughout the State.

3. To inspect, from time to time, and to supervise the agricultural courses of high schools operating under the provisions of the Federal and State Vocational Education Acts.

4. To keep the Commissioner of Vocational Education and the State Board of Education informed of the progress made in this State by submitting a report to the Vocational Education Department of the State at the end of each quarter.

5. To assist the Commissioner of Vocational Education to pass on the validity of the claims of schools that have maintained vocational courses in agriculture during the year.

6. To aid the schools operating or desiring to operate under the provisions of the State and Federal Acts to secure properly qualified teachers, and to aid the State Board in determining their qualifications for certification.

7. To assist in the preparation of report blanks for the use of pupils, teachers, and principals, and to perform such other duties relating to the promotion of his field as may be assigned by the Commissioner of Vocational Education and the State Board of Education.

8. To represent the Federal and State Boards in the supervision of the training of teachers of vocational agriculture under the Federal and State Acts.

9. To aid in securing suitable men to take the teacher training courses provided by the classes set up for this purpose by the State Board of Education.

10. To co-operate in every way possible with the Federal Board and with the representatives of the Federal Board in promoting the interests of agricultural education in this State.

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PLAN FOR THE TRAINING OF VOCATIONAL TEACHERS UNDER THE PROVISIONS OF THE FEDERAL AND STATE VOCATIONAL EDUCATION ACTS.

Amount of Combined State and Federal Funds and a Tentative Budgeting of the Same.

It appears that the State Board of Education will have the following funds from combined Federal and State sources for application to the training of teachers, supervisors, or directors of agricultural subjects, and teachers of trade, industrial, and home economics subjects:

For such training during the year 1918-19.....	\$36,321.74
For such training during the year 1919-20.....	46,699.38
For such training during the year 1920-21.....	51,888.82
For such training annually thereafter.....	51,888.82

Since better opportunities are provided in this State for the training of home economics than for other vocational teachers, it is planned that the tentative budget segregation shall be as follows:

For the training of teachers of home economics—

During the year 1918-19.....	\$7,270.10
During the year 1919-20.....	9,340.00
During the year 1920-21.....	10,378.00
Annually thereafter	10,378.00

For the training of teachers of agriculture—

During the year 1918-19.....	\$12,566.74
During the year 1919-20.....	16,165.38
During the year 1920-21.....	17,960.82
Annually thereafter	17,960.82

For the training of teachers of trades and industries—

During the year 1918-19.....	\$16,485.00
During the year 1919-20.....	21,195.00
During the year 1920-21.....	23,550.00
Annually thereafter	23,550.00

General Statement of Plan.

1. The California State Board of Education plans to co-operate with:
 - a. The University of California in the training of vocational teachers of agriculture, and of the trades and industries.

b. The Los Angeles State Normal School in the training of vocational teachers of the trades and industries.

c. The State Normal Schools that are authorized to train high school teachers in household arts subjects, in the training of women who have had practical experience in household duties and home management, as vocational teachers of home economics.

2. The Board also plans to employ a supervisor of teacher-training courses in home economics.

PART I.

PLAN OF CO-OPERATION WITH UNIVERSITY OF CALIFORNIA.

The State Board of Education plans to co-operate with the University of California for the purpose of training teachers of agricultural, trade and industrial subjects on the following terms.

SUBDIVISION 1.

Classes for the Training of Teachers, Supervisors, and Directors of Agricultural Subjects.

1. The University will maintain in connection with and under the direct supervision of the School of Education, training classes for vocational teachers of agricultural subjects at one or more of the following places: The Kearney Farm in Fresno County, the Citrus Experiment Station in Riverside County, and the Davis Farm in Yolo County. The number, the location, and the dates of establishment of these classes will be determined after a survey of the situation has been made by the parties concerned.

2. The University will place each of the classes for the training of teachers of agricultural subjects in charge of a Director and such other teachers as are considered necessary, and it will also provide a General Director of the same, who shall be the Chief of the Division of Agricultural Education at the University. Said General Director will devote not less than one-third of his time to the direction of these classes, and his salary will be prorated on the basis of relative service given to the University and the State Board of Education.

The teaching positions created, the general director, the directors and teachers appointed, and the salary schedules shall be agreed upon by the President of the University, the Director of the University School of Education and the State Board of Education.

Other proposed expenditures, chargeable to the Federal and State Vocational Education Fund, may be made only as directed by the State Board of Education.

3. Any of the above directors and teachers may be employed for joint service in the School of Education and in the College of Agriculture or in a California State Normal School or other California school, in which case the director or teacher so employed shall also be satisfactory to the Dean of the College of Agriculture, or to the President or to the Principal of the school co-operating in such employment.

4. The class for the training of teachers of agricultural subjects will be open only to persons of good moral character, of good health, without physical or other defect which would impair their fitness as teachers of vocational agriculture, and who, in addition thereto, are one of the following:

a. Graduates from the agricultural departments of land grant colleges or of universities.

b. Certain select students with senior standing in the agricultural departments of the above mentioned institutions.

c. Persons who have had at least four years of schooling beyond the eighth grade of an elementary school course, at least six years of farm experience secured after the age of eighteen, and who give evidence of being familiar with scientific farming.

d. Persons of like character who have had six years of such schooling and at least four years of such farm experience.

e. Persons who, in the judgment of the School of Education, have training and experience which are equivalent to any of the above.

5. Should it become evident to the Director and Faculty of the training classes for teachers, supervisors, and directors of agricultural subjects that any student who is enrolled therein does not possess the fitness which will qualify him as a good teacher of the subject which he is preparing to teach, the Director shall notify said student of the fact, and he shall thereupon withdraw from the course. Should the student upon such presentation fail to withdraw, he shall be dismissed by the Director.

6. The normal length of the course for graduates of colleges of agriculture that maintain four-year college courses beyond a four-year high school course, and persons with the senior standing mentioned above, will be one year; and persons other than such graduates will be placed upon courses the length of which shall be determined by the director and teachers of the local class concerned.

7. Before graduation all students who have had less than one full year of successful experience gained in conducting a farm or a farm project upon a commercial basis will be required to devote one-half of a

year (a) to practical farm work which shall include for each student one or more farm projects, conducted on a commercially productive basis, and (b) to preparation for giving the instruction in farm mechanics as specified in Bulletin No. 23, California State Board of Education. All other students before completing the course of training provided by such classes shall qualify for such instruction in farm mechanics.

8. At least twelve university units of education, or an equivalent based upon teaching experience will be required of each person completing the course. At least four of said twelve units will consist of practice teaching in agriculture which shall include the direction of farm project work as set forth for vocational courses in agriculture, Bulletin No. 23, California State Board of Education.

9. *Credentials*: The State Board of Education will issue a special credential to each student who completes the prescribed course for the training of teachers, supervisors, or directors of agricultural subjects. Should the demand for such teachers, supervisors, or directors exceed the supply, the State Board of Education may grant special credentials to persons who have not completed the full course, provided that they are recommended by the director of the classes.

10. The Director of the School of Education shall submit to the State Board of Education, for its approval and for the approval of the Federal Board, a complete outline of the courses of study proposed for the teachers' training classes; and any future modifications of the same shall be submitted to the State Board for its approval and for the approval of the Federal Board.

11. All classes and the instruction therein shall be open to inspection and supervision by the State Board of Education and its officials.

12. The University shall, upon request, report to the State Board of Education, the annual outlay for the general director's, directors' and teachers' salaries, and other authorized expenses, and in addition thereto such other information as the Board may desire.

13. Upon requisition from the proper university authority, the State Board of Education will pay all authorized expenditures for the maintenance of such special classes; provided, that it will not pay expenditures in an amount in excess of \$12,566.74 for classes conducted during the year 1918-19, \$16,165.38 for classes conducted during the year 1919-20, \$17,960.82 for classes conducted during the year 1920-21 and for classes conducted thereafter \$17,960.82, annually. All of the above are subject to the limitations of the Federal law and future adjustments by the State Board of Education, as approved by the Federal Board.

SUBDIVISION 2.

Classes for the Training of Teachers of Trade and Industrial Subjects.

1. The University will maintain, in connection with and under the direct supervision of its School of Education, evening training classes for teachers of applied trade and industrial subjects, for teachers of supplemental subjects, for directors of vocational courses, and for teachers of continuation classes in civic and vocational subjects.

2. The University will place this department in charge of a director and such other supervisors and teachers as are considered necessary.

The teaching positions created, the directors, supervisors, and teachers appointed, and the salary schedule shall be agreed upon by the President of the University, the Director of the University School of Education, and the State Board of Education.

Other proposed expenditures, chargeable to the Federal and State Vocational Education Fund, may be made only as directed by the State Board of Education.

3. The supervisors of the courses designed to prepare teachers of applied work in vocational subjects shall be experienced instructors of vocational classes made up of secondary grade pupils; and the supervisors and teachers of the other courses shall be experienced teachers chosen because of their special fitness for the work.

In addition to other duties, said supervisors shall be made responsible for the practice teaching of the students under their charge, for the work in education dealing with the content of their special subjects, and for the methods of instruction to be used.

4. The University will co-operate with one or more city boards of education for the purpose of providing practice teaching.

5. It will be the aim to establish courses for the training of:

- a. Teachers of applied trade and industrial subjects;
- b. Teachers of subjects supplemental to trade and industrial instruction, or occupations;
- c. Teachers of continuation classes in civic and vocational subjects;
- d. Supervisors or directors of vocational schools, courses or classes.

Courses for the training of teachers of the various trades and industries will be established in the order of their importance as evidenced by the demand of the public schools of the State.

6. *Entrance Requirements:*

- a. The classes for the training of teachers of applied work in trade and industrial subjects will be open only to persons of twenty-four years of age or over, of good moral character, of good

health, without physical defect which would impair their fitness for the teaching service, who pass examinations in oral and written English composition and in civic and general information; and who have had at least two years* of experience as journeymen workers, or—where this terminology does not apply—its equivalent, in the vocations they are preparing to teach.

b. The classes for the training of teachers of supplemental subjects will be open only to persons mentioned under *a*, to persons holding teachers' certificates of secondary (high school) grade, and to persons who will be able to qualify for such certificates upon the completion of the work of the course.

c. The course for the training of teachers as instructors of general continuation classes in civic and vocational subjects will be open only to persons mentioned under *a* and *b* above; to persons with at least three years of teaching experience who hold California Normal School diplomas or normal school diplomas granted by institutions of equal rank; to such other elementary or secondary school teachers as satisfy the director of the vocational teachers' training classes that they are especially fitted by training and experience for this work and who, in the judgment of the Commissioner of Industrial and Vocational Education, will be able to qualify upon the completion of the course for a certificate of secondary grade.

d. The classes for supervisors or directors of vocational courses will be open to persons charged with the supervision or direction of trade or industrial schools, courses, or classes, or to experienced teachers holding certificates of secondary (high school) grade who are preparing for such supervision or direction.

There shall be no minimum uniform standard of academic proficiency required for persons preparing to give instruction in applied work in different occupations, but the aim shall be to secure for the service the best material that may be had for each occupation.

7. The number of persons accepted for training as teachers of each of the subjects shall be governed by the probable future demand for trained teachers of these subjects.

8. Should it become evident to the Director and Faculty of the Evening Training Classes for Vocational Teachers that any student who is enrolled therein does not possess the fitness which will qualify him as a good teacher of the subject which he is preparing to teach, the Director shall notify said student of the fact, and he shall thereupon

*At least three years of journeyman experience are required by law for a vocational certificate.

withdraw from the course. Should the student upon such presentation fail to withdraw, he shall be dismissed by the Director.

9. *Length and Content of Courses:*

a. The normal length of the courses for teachers of applied subjects is, for the present, fixed at 280 sixty-minute hours of instruction and practice teaching. Of this time, approximately one hundred hours will be devoted to practice teaching. Where possible, observation and practice teaching will begin immediately upon entrance to the course. The remainder of the time will be devoted to technical and theoretical educational work. The technical work will deal only with such subjects as the applications of English, science, mathematics, and drawing to instruction in the applied work. The educational work will deal with problems such as the establishment of the content of the course in the vocation and a study of the methods of its presentation. It will also include a study of the school system and the place of vocational education therein.

b. The length of the courses for teachers of supplemental subjects, for teachers of general continuation classes, and for supervisors or directors, will for the present, be undefined.

The course in supplemental subjects will deal only with such topics as the selection of the material which shall constitute their content, and proper methods of presentation.

10. *Credentials:* The State Board of Education will issue a special credential to each student who completes the prescribed course for teachers of applied or supplemental subjects or for teachers of general continuation classes. Should the demand for vocational teachers in any subject exceed the supply, the State Board of Education may grant special credentials to persons who have not completed the full course, provided that they are recommended by the Director of the classes.

11. The Director of the School of Education shall submit to the State Board of Education, for its approval and for the approval of the Federal Board, complete outlines of the work contemplated in each of the courses mentioned above, and any future modifications of the same shall also be submitted to the State Board for its approval and for the approval of the Federal Board.

12. The director of the training classes for vocational teachers shall not be assigned to any other duties but shall give his entire time to the direction of the work, and he shall be made personally responsible for the recruiting of students from the various trades and industries of the community.

13. All classes and the instruction therein shall be open to inspection and supervision by the State Board of Education and its officials.

14. The University authorities shall, upon request, report to the State Board of Education the annual outlay for the director's and teachers' salaries and other authorized expenditures, and in addition thereto such other information as the Board may desire.

15. Upon requisition from the proper University authority the State Board of Education will pay all authorized expenditures for the maintenance of such special classes; provided, that it will not pay expenditures in amount in excess of \$8,242.50 for classes conducted during the year 1918-19, \$10,597.50 for classes conducted during the year 1919-20, \$11,775.00 for classes conducted during the year 1920-21, and \$11,775.00 annually for classes conducted thereafter. All of the above are subject to the limitations of the Federal and State law and future adjustments by the State Board of Education, as approved by the Federal Board.

16. This plan does not contemplate that funds shall be used to compensate city teachers to whom student teachers are assigned for practice teaching.

PART II.

PLAN OF CO-OPERATION WITH LOS ANGELES STATE NORMAL SCHOOL FOR THE TRAINING OF TEACHERS OF TRADE AND INDUSTRIAL SUBJECTS.

The State Board of Education plans to co-operate with the Los Angeles State Normal School, for the purpose of training teachers of trade and industrial subjects on the following terms:

1. The Los Angeles State Normal School will maintain evening training classes for teachers of applied trade and industrial subjects, for teachers of supplemental subjects, for directors of vocational courses, and for teachers of continuation classes in civic and vocational subjects.

2. The Normal School will place this department in charge of a Director and such other supervisors and teachers as are considered necessary.

The teaching positions created, the directors, supervisors, and teachers appointed, and the salary schedules shall be agreed upon by the President of the Normal School and the State Board of Education.

Other proposed expenditures, chargeable to the Federal and State Vocational Education Fund, may be made only as directed by the State Board of Education.

3. The supervisors of the courses designed to prepare teachers of applied work in vocational subjects shall be experienced instructors of

vocational classes made up of secondary grade pupils; and the supervisors and teachers of the other courses shall be experienced teachers chosen because of their special fitness for the work.

In addition to other duties, said supervisors shall be made responsible for the practice teaching of the students under their charge, for the work in education dealing with the contents of their special subjects, and for the methods of instruction to be used.

4. The Normal School will co-operate with one or more city boards of education for the purpose of providing practice teaching.

5. It will be the aim to establish courses for the training of:

- a. Teachers of applied trade and industrial subjects;
- b. Teachers of subjects supplemental to trade and industrial instruction, or occupations;
- c. Teachers of continuation classes in civic and vocational subjects;
- d. Supervisors or directors of vocational schools, courses or classes.

Courses for the training of teachers of the various trades and industries will be established in the order of their importance as evidenced by the demand of the public schools of the State.

6. *Entrance Requirements:*

a. The classes for the training of teachers of applied work in trade and industrial subjects will be open only to persons of twenty-four years of age or over, of good moral character, of good health, without physical defect which would impair their fitness for the teaching service, who pass examinations in oral and written English composition and in civic and general information; and who have had at least two years* of experience as journeymen workers, or—where this terminology does not apply—its equivalent, in the vocations they are preparing to teach.

b. The classes for the training of teachers of supplemental subjects will be open only to persons mentioned under *a*, to persons holding teachers' certificates of secondary (high school) grade, and to persons who will be able to qualify for such certificates upon the completion of the work of the course.

c. The course for the training of teachers as instructors of general continuation classes in civic and vocational subjects will be open only to persons mentioned under *a* and *b* above; to persons with at least three years of teaching experience who hold California

*At least three years of journeyman experience are required by law for a vocational certificate.

Normal School diplomas or normal school diplomas granted by institutions of equal rank; to such other elementary or secondary school teachers as satisfy the director of the vocational teachers' training classes that they are especially fitted by training and experience for this work and who, in the judgment of the Commissioner of Industrial and Vocational Education, will be able to qualify, upon the completion of the course, for a certificate of secondary grade.

d. The classes for supervisors or directors of vocational courses will be open to persons charged with the supervision or direction of trade or industrial schools, courses, or classes, or to experienced teachers holding certificates of secondary (high school) grade who are preparing for such supervision or direction.

There shall be no minimum uniform standard of academic proficiency required for persons preparing to give instruction in applied work in different occupations, but the aim shall be to secure for the service the best material that may be had for each occupation.

7. The number of persons accepted for training as teachers of each of the subjects shall be governed by the probable future demand for trained teachers of these subjects.

8. Should it become evident to the Director and Faculty of the Evening Training Classes for Vocational Teachers that any student who is enrolled therein does not possess the fitness which will qualify him as a good teacher of the subject which he is preparing to teach, the Director shall notify said student of the fact, and he shall thereupon withdraw from the course. Should the student upon such presentation fail to withdraw, he shall be dismissed by the Director.

9. *Length and Content of Courses:*

a. The Normal length of the courses for teachers of applied subjects is, for the present, fixed at 280 sixty-minute hours of instruction and practice teaching. Of this time, approximately one hundred hours will be devoted to practice teaching. Where possible, observation and practice teaching will begin immediately upon entrance to the course. The remainder of the time will be devoted to technical and theoretical educational work. The technical work will deal only with such subjects as the applications of English, science, mathematics, and drawing to instruction in the applied work. The educational work will deal with problems such as the establishment of the content of the course in the vocation, and a study of the methods of its presentation. It will also include a study of the school system and the place of vocational education therein.

b. The length of the courses for teachers of supplemental subjects, for teachers of general continuation classes, and for supervisors or directors will, for the present, be undefined.

The course in supplemental subjects will deal only with such topics as the selection of the material which shall constitute their content, and proper methods of presentation.

10. *Credentials*: The State Board of Education will issue a special credential to each student who completes the prescribed course for teachers of applied or supplemental subjects or for teachers of general continuation classes. Should the demand for vocational teachers in any subject exceed the supply, the State Board of Education may grant special credentials to persons who have not completed the full course, provided that they are recommended by the Director of the classes.

11. The President of the State Normal School shall submit to the State Board of Education, for its approval and for the approval of the Federal Board, complete outlines of the work contemplated in each of the courses mentioned above, and any future modifications of the same shall also be submitted to the State Board for its approval and for the approval of the Federal Board.

12. The director of the training classes for vocational teachers shall not be assigned to any other duties but shall give his entire time to the direction of the work, and he shall be made personally responsible for the recruiting of students from the various trades and industries of the community.

13. All classes and the instruction therein shall be open to inspection and supervision by the State Board of Education and its officials.

14. The Normal School authorities shall, upon request, report to the State Board of Education the annual outlay for the directors' and teachers' salaries and other authorized expenditures, and in addition thereto such other information as the Board may desire.

15. Upon requisition from the proper Normal School authority, the State Board of Education will pay all authorized expenditures for the maintenance of such special classes; provided, that it will not pay expenditures in an amount in excess of \$8,242.50 for classes conducted during the year 1918-19, \$10,597.50 for classes conducted during the year 1919-20, \$11,775.00 for classes conducted during the year 1920-21, and \$11,775.00 annually for classes conducted thereafter. All of the above are subject to the limitations of the Federal and State law and future adjustments by the State Board of Education, as approved by the Federal Board.

16. This plan does not contemplate that funds shall be used to compensate city teachers to whom student teachers are assigned for practice teaching.

PART III.

PLAN FOR THE SUPERVISION OF TEACHER-TRAINING COURSES IN HOME ECONOMICS UNDER THE PROVISIONS OF THE FEDERAL AND STATE VOCATIONAL EDUCATION ACTS.

The State Board of Education herewith sets up the following plan for the supervision of teacher-training courses in home economics:

Employment of State Supervisor.

The Board plans to employ a State Supervisor of Teacher-Training Courses in Home Economics, and to use a part of the funds provided under section 3 of the Federal Act to pay one-half of the salary and one-half of the traveling expenses of said Supervisor.

Qualifications of Supervisor.

The qualifications of the State Supervisor of Teacher-Training Courses in Home Economics shall be as follows:

1. She shall be technically trained and able to qualify for a special certificate in Household Science and Household Arts in the State of California as specified under Division IV, Document III of this bulletin.

2. She shall have had practical experience in the management of a home.

3. She shall have had teaching experience in both household science and household arts subjects, and administrative experience as a supervisor of teacher-training courses.

Duties of Supervisor.

It shall be the duty of the State Supervisor of Teacher-Training Courses in Home Economics:

1. To investigate the teacher-training courses of all institutions in the State of California, authorized by the State Board of Education to prepare teachers of home economics subjects.

2. To submit to the State Board for approval and adoption minimum essentials for a standard teacher-training course in the same.

3. To supervise by visitation and otherwise the training of teachers in the various institutions of California authorized by the State Board of Education to prepare teachers of home economics subjects.

4. To counsel with administrators in teacher-training institutions on the subject of vocational home economics education, and to explain to them the plan of operation of the Federal Act for Vocational Education, as applied to teacher training in this subject.

5. To assist said institutions in recruiting students of the desired character, training, and experience for training as teachers of home economics subjects.

6. To conduct extension courses for teachers of home economics subjects employed in schools and classes organized under the Federal Act, and in addition, if time permits, to give a few extension courses, open only to teachers of such subjects in other public schools and classes, who hold State Board Credentials of the Secondary Grade Household Arts Type.

PART IV.

PLAN OF CO-OPERATION WITH CERTAIN STATE NORMAL SCHOOLS, FOR THE TRAINING OF EXPERIENCED HOME MAKERS AS TEACHERS OF HOME ECONOMICS.

The State Board of Education plans to co-operate with the Chico, Fresno, Los Angeles, San Diego, San Jose, and Santa Barbara Normal Schools for the preparation of women with certain academic training and household experience for vocational teachers of home economic subjects on the following terms:

1. The courses for the training of such teachers will be open only to women who have had at least four years of schooling beyond a complete elementary school course, or its equivalent in private instruction, and at least four years of experience after the age of eighteen in managing a home and in performing all of the usual duties of a housekeeper.

2. Preference will be given to persons who have had experience in the maternal care of children.

3. Each candidate, before being certified to this course, shall satisfy the authorities of the Normal School concerned as to her character and general intelligence. She shall also pass a rigid examination designed to establish whether or not her home experience has been of such character as to warrant its being substituted as an equivalent for two years of the usual four-year collegiate requirement for the training of household arts teachers.

4. The normal length of the course for such teachers will be two years, and said course will be in conformity with the required training specified in Bulletin No. 10, State Board of Education, for the preparation of household science and household arts teachers for high schools.

The course of training for these persons shall be such as will prepare them to teach all of the subjects specified in the course outlined in Bulletin No. 23, State Board of Education, for full-time day home economics courses and as outlined in a minimum course of study to be submitted to the Federal Board for Vocational Education.

5. It will not be necessary, in order to comply with the provisions of this agreement, for the Normal Schools to maintain separate courses and separate classes for these persons; provided, that said institutions

offer opportunities for such students to make up any deficiencies in science necessary to enable them to pursue intelligently the courses for the training of teachers of household science and household arts.

6. The Normal School authorities shall, upon request, report to the State Board of Education the average amount per capita expended during the year for the maintenance of the household science and household arts courses, and in addition thereto such other information as the Board may desire.

7. As partial reimbursement for the expense of the instruction mentioned above, the State Board will, during the first quarter of the fiscal year of 1919-20, reimburse the institutions mentioned above in an amount which shall not exceed one hundred fifty dollars for each unit of average daily attendance during the preceding school year, of all persons so certified; provided, that the State Board of Education will not apportion to any institution more than it expended for the instruction of the persons on account of whom the reimbursements are made; and provided, further, that should the funds available for this purpose be insufficient to meet all of these obligations, the State Board will apportion the funds, available for the purpose, pro rata to the institutions in accordance with said obligations.

The funds available for this purpose will approximate the following:

For instruction provided during the year 1918-19.....	\$3,670.00
For instruction provided during the year 1919-20.....	5,740.00
For instruction provided during the year 1920-21.....	6,778.00
For instruction provided annually thereafter.....	6,778.00

The above apportionments are subject to the limitations of the Federal and State law and to adjustment by the State Board of Education as approved by the Federal Board.

